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BUSINESS
The Journal of Management & Industry
JANUARY 1956



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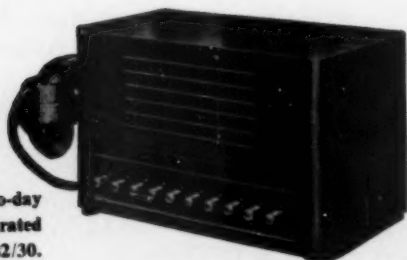




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JANUARY, 1956

Business

THE JOURNAL OF MANAGEMENT IN INDUSTRY

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NEXT MONTH

Management Training Facilities

The opening article in the February issue will survey the management training facilities available in Britain today, judging them according to the type of student they cater for, the length of course, the technique of teaching, and whether they are more concerned with principles or practical methods



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A launderer's training scheme for young girls picks out potential manageresses and supervisors for special technical training

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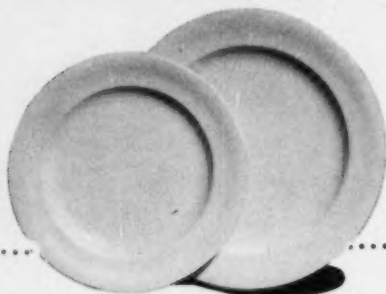
COVER PICTURE

A perusal of this month's cover picture will recall to the reader's mind the wide range of major management subjects covered by **BUSINESS** in the course of twelve months.

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BUSINESS, Vol. 86, No. 1 (incorporating "The Magazine of Commerce," "Modern Business," "System," "Business Organization and Management," "Business News Digest" and "British Industrial Equipment"). Published monthly by Business Publications Ltd., registered office 180 Fleet Street, London, E.C.4. (Waterloo 3388). 30/- a year post free U.K. and Eire; 35/- Overseas.
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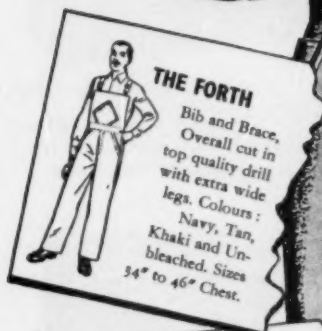
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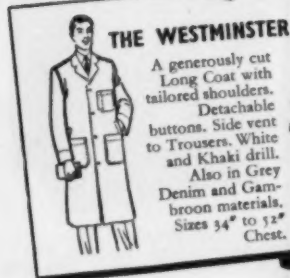
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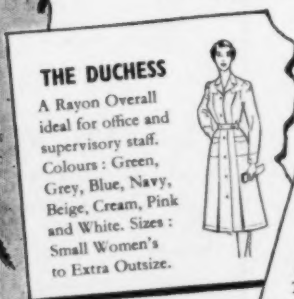
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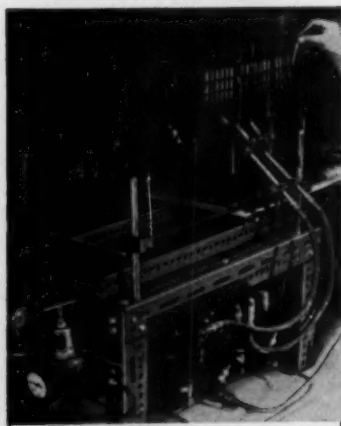
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IND 2

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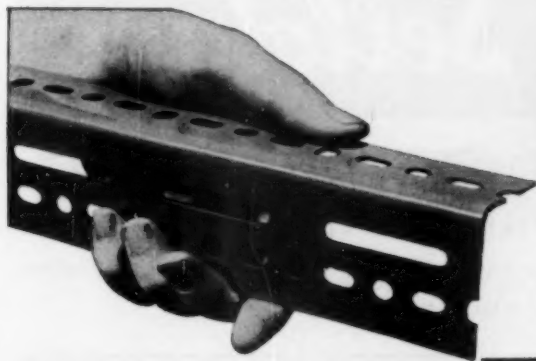
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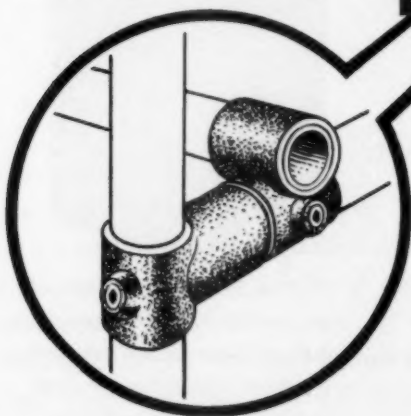
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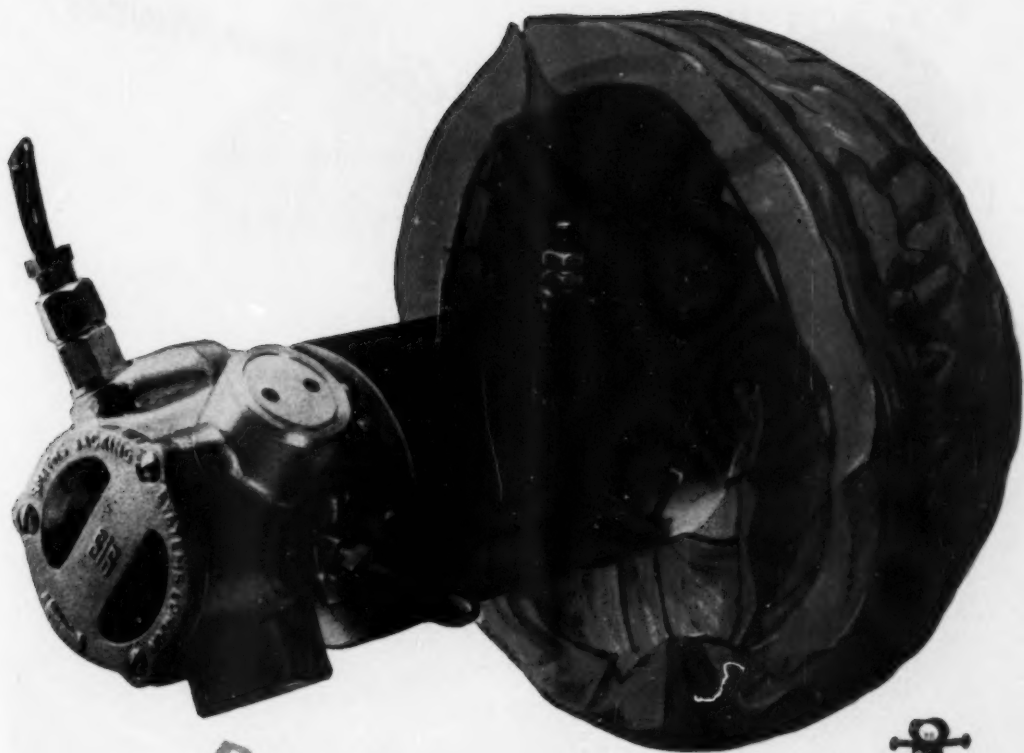
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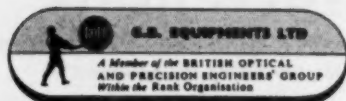


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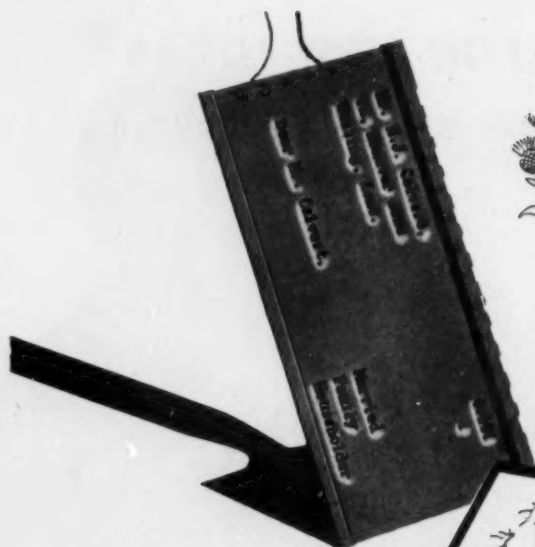
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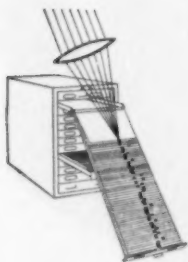
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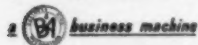
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* Actual size of keys on all Facit models. The other illustrations show the Facit NTK, one of the hand machines in the Facit range of ten-key calculators.



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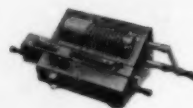
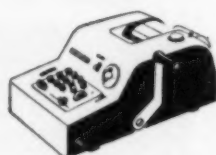
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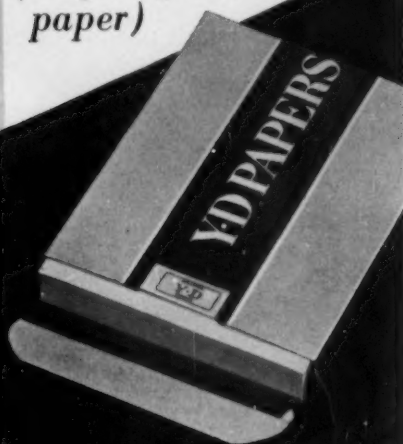
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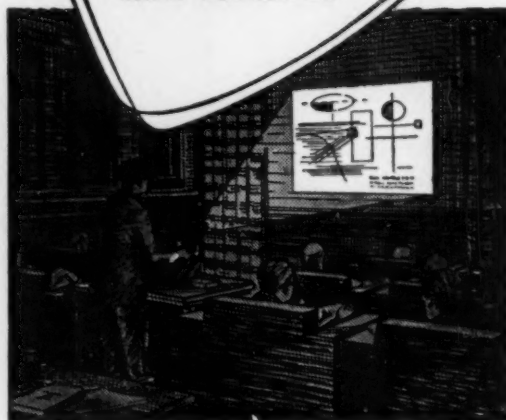
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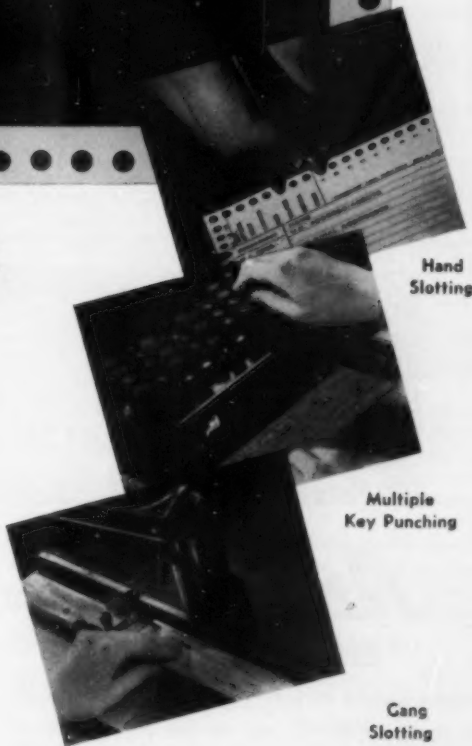


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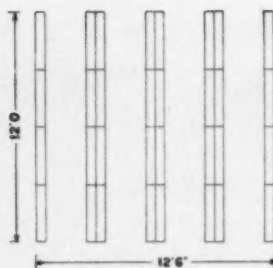
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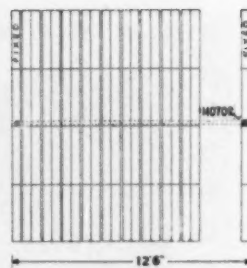
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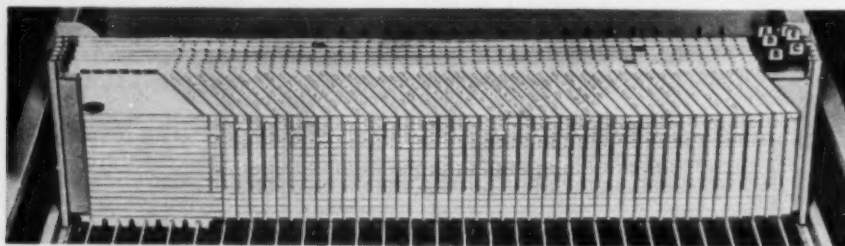
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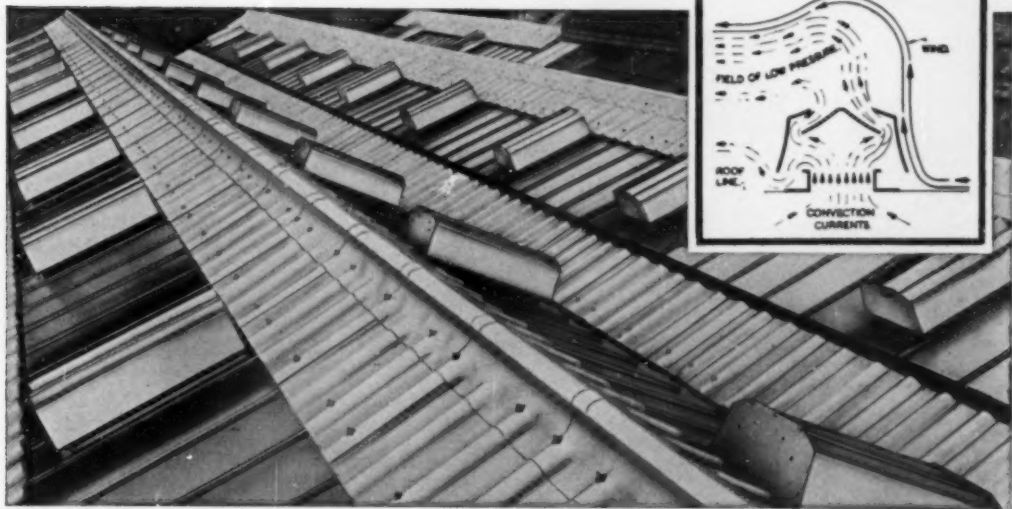
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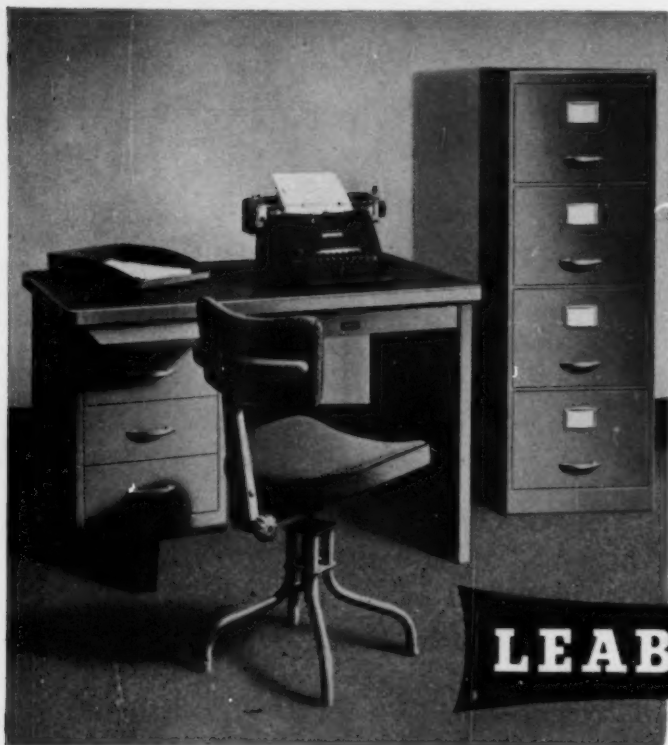


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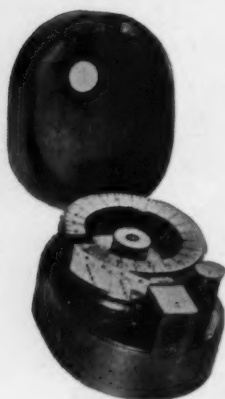
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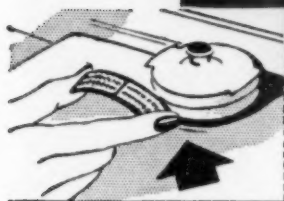
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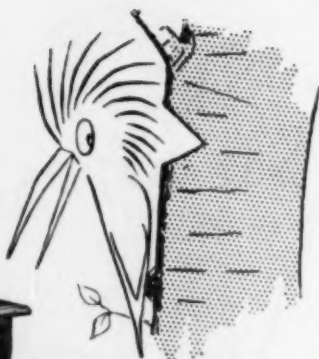
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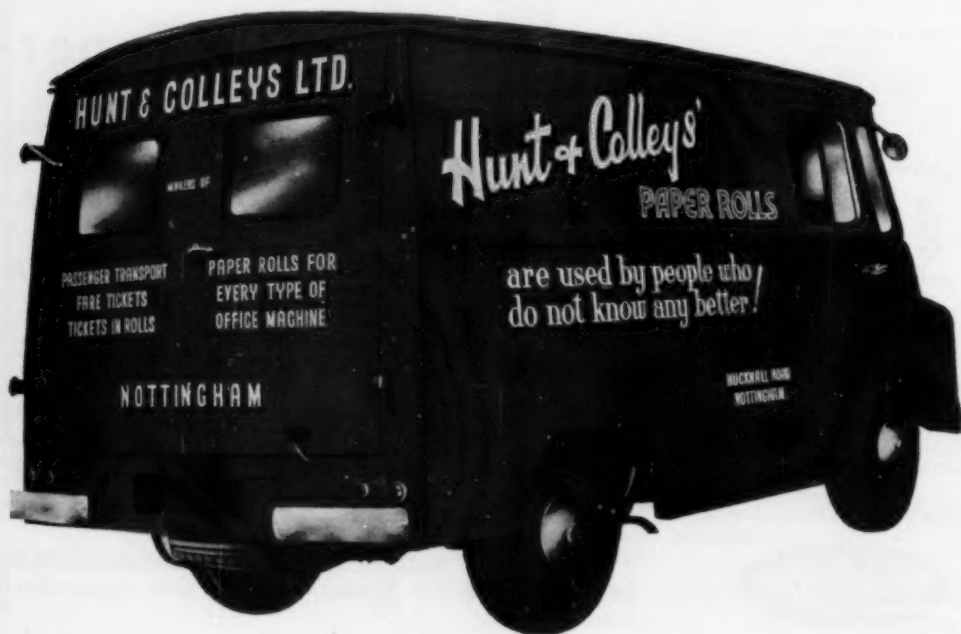


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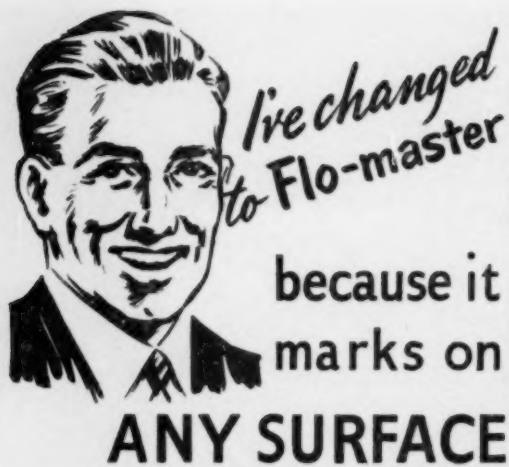
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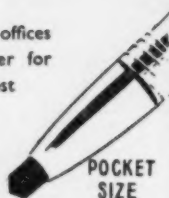
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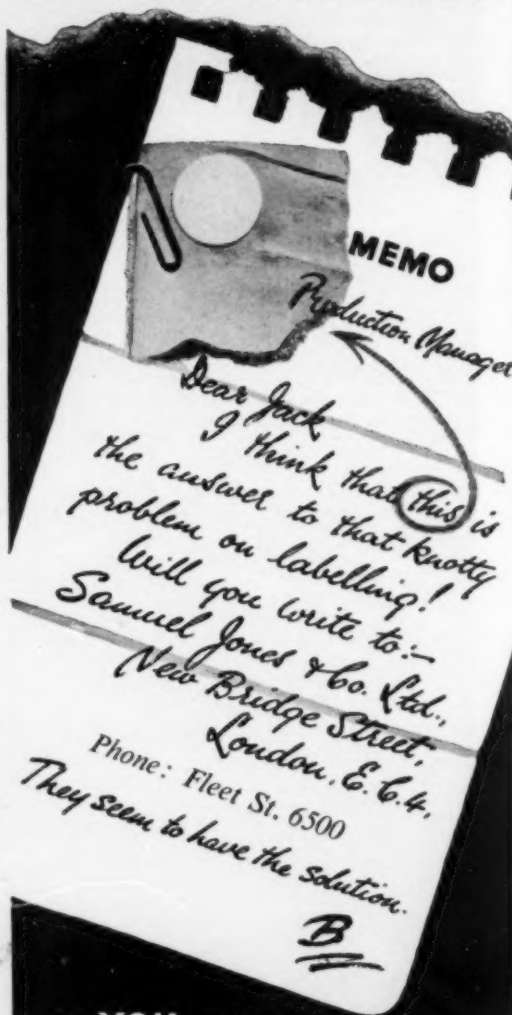
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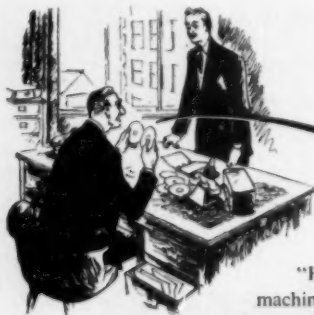
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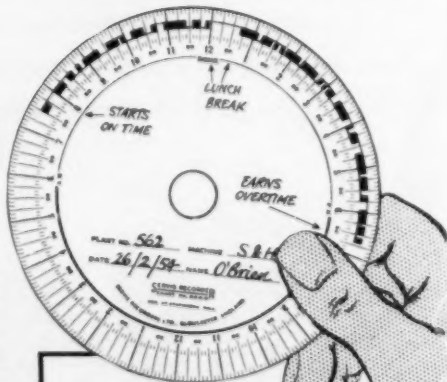


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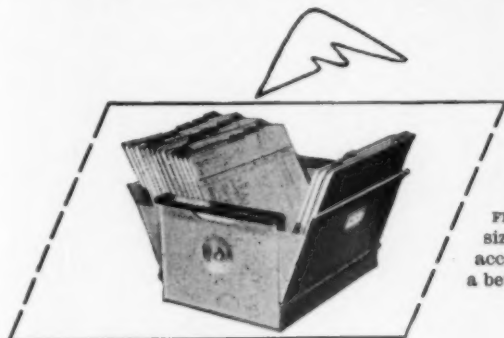


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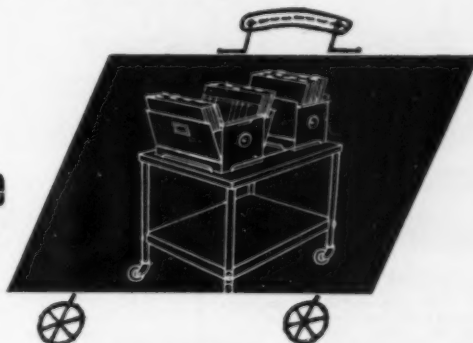
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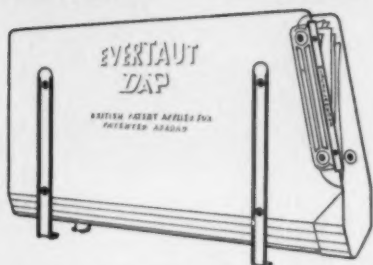
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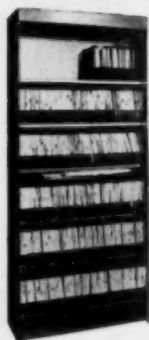
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Wednesday

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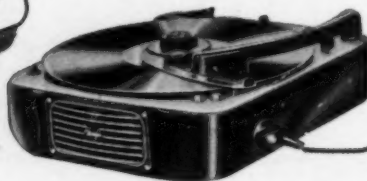
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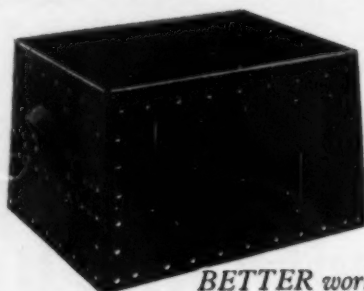
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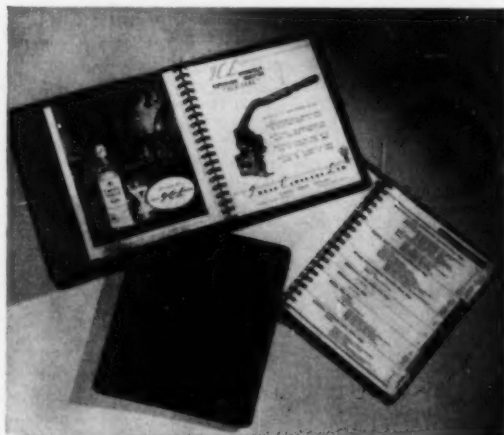


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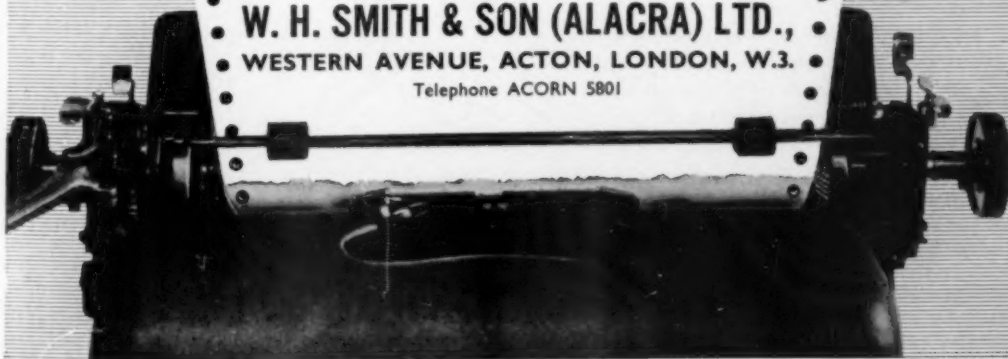
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1947

1956 — New Policies Expected

London, December 19, 1955

RECESSION UNLIKELY

It is unlikely that there will be a recession in British business activity during 1956. After 11 months of credit squeeze, stocks are not high. Also investment plans are mostly too far committed, and too justifiable on economic grounds, to be called off. And wage increases, some of which will no doubt result from the recent spate of claims, will keep consumer spending on the upward plane.

But businessmen will have to be wary of Government action to correct policy mistakes of the past three years. One mistake was in housing. The original promise to build 300,000 houses a year may have been politically justifiable, but it should have been approached more slowly, and accompanied by a definite savings plan which would have encouraged more potential home-buyers to cut consumption and save for a home. Moreover, the target should never have been exceeded.

Between 1951 and 1954, no less than 70 per cent of the increase in domestic fixed capital formation went into houses. Since then, the building rate has been cut from 354,000 in 1954 to about 325,000 in 1955, and it may be no more than 300,000 in 1956, perhaps even lower. Because of this reduction, and parallel increases in other forms of investment, notably that in industrial plant and buildings, the proportion of fixed investment devoted to housing has fallen from 27 per cent in 1954 to an estimated 22 per cent in 1955.

Recent subsidy cuts will stimulate a further fall, and there will very likely be a more liberal Rents Restriction Act in 1956. The Government are in a good position to introduce this, because the next General Election is possibly four years away.

The Government can be and must be bold on rents, but any successful policy for increasing rents will stimulate the demand for plumbing and other repair and refitting services, while decreasing the demand for new houses and their main ingredients. The paint and electrical appliance industries should have a good year—also domestic grates and stoves.

The second major mistake in Government policy was to introduce an industrial investment allowance and a series of investment programmes for nationalized industries, without taking any radical steps at the same time to stimulate saving. As a result, the economy quickly became over-stretched when the investment boom got under way.

There was at the time an excuse for ignoring the problem of increased savings. For personal savings did increase spontaneously from £143 million in 1951 to £588 million in 1952 and £677 million in 1953, with a slight relapse to £627 million in 1954. It is estimated that the 1955 total will be somewhere over £610 million.

Likewise company savings grew from £619 million in 1951 to £1,081 million in 1954, and it appears that they were slightly higher in 1955. But allocations to tax reserves fell rather drastically, having increased by £426 million in 1951 and by only £121 million in 1954. Likewise savings by public authorities fell from £472 million in 1951 to £261 million in 1954, although they should be over £300 million in 1955.

The New "BUSINESS"

From March onwards BUSINESS will have a larger page size. And there will be new features, including a science section

PROSPECT

survey and forecast of business conditions

Savings Not Enough

The rise in total savings from £1,660 million in 1951 to £2,090 million in 1954, (and possibly £200 higher in 1955), has not been great enough to finance the increased rate of investment, the necessary accumulation of stocks which goes with rising production, and the proposed foreign trade surplus of £300 million a year.

This surplus is necessary not merely to fulfil British intentions regarding investment in the overseas Empire. Some of it is necessary to service the American and Canadian dollar loans, on which over £60 million must be paid at the end of each year.

The New Year should see the Chancellor of the Exchequer more deeply concerned with the problem of how to raise the long-term level of saving, so that the British investment boom may continue without the economy being over-stretched. He has not yet done anything to implement the recommendations of the Millard Tucker Committee on the Taxation Treatment of Provisions for Retirement, and he has not yet done anything positive to stimulate employee shareholding schemes—both of which would raise the level of saving by executives and workers.

The credit squeeze has been moderately successful. Bank advances at the end of November 1955 were £1,967 million, a decrease of over £13 million on the level a year earlier, in spite of the fact that industrial output had meanwhile increased by about 4½ per cent and prices had risen by 5½ per cent. To finance increases in stocks alone, industrialists might have been expected to require perhaps 10 per cent more in advances—quite apart from any indirect use of advances to finance fixed investment. Between August and November there was a slight reduction in advances to the retail trade, and a virtual freeze on new advances to the engineering, shipbuilding and chemical industries, in spite of sharply rising production.

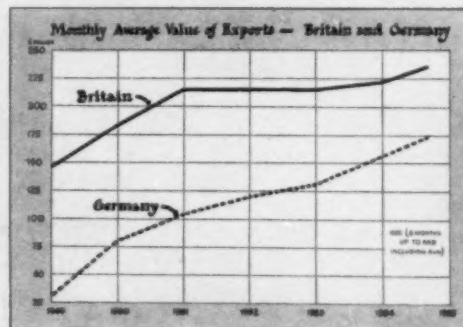
But the credit squeeze can have only limited effect, for a major part of credit expansion takes place between traders who buy and sell from each other, outside the banking system. Provided they are not short of cash, and business is booming, there is no reason why they should not carry greater volumes of debt for each other. And there is no shortage of cash. A week before Christmas the active note circulation was £1,870 million, or £135 million more than a year earlier.

Likewise with fixed investment, more than half of this is done by public authorities, and is therefore controlled more by political motives and aspirations than by the mechanism of the credit squeeze, even though local authorities are being forced to borrow in the capital market.

The boom in the United States continues unabated, and a recent O.E.E.C. report shows that industrial and commercial stocks are not high—in fact they are only now starting to move up. American expansion should help to keep up world raw material prices in 1956, and indirectly maintain overseas capacity to buy British exports.

German Export Competition

This graph compares the trends of British and German exports from 1949 to the late summer of 1955. An article on page 73 analyses British and German exports of eight major product groups to eight major markets during the last three years, and presents case histories of successful British export ventures.



survey and forecast of business conditions

PROSPECT

SALIENT FIGURES
OF THE MONTH

Production index for September (8) was 137, or 20 points above the level in August, and 4 points above the figure for September, 1954. The provisional figure for October was 142-143, which compares favourably with 128 for October last year.

Value of exports (22) in November was £262.2 million, being £5.5 million less than in October but £60.3 million higher than November, 1954, a month affected by a dock strike. **Imports (20)** were £342.2 million in November, which was £8.8 million more than in October and £27.7 million more than a year ago.

Registered unemployed (7) in November were 226,000, or 11,000 more than in October but 37,000 fewer than the same month of 1954. **Total employment in manufacturing industry (3)** was 9,374,000 in October, being 52,000 more than in September, and 245,000 more than a year earlier. **Employment in the distributive trades (5)** in October was 2,839,000, or 23,000 more than in September, and 93,000 more than a year earlier.

Retail sales index in October (25) was 147, being 9 points above the figure for September, and 16 points higher than in October, 1954.

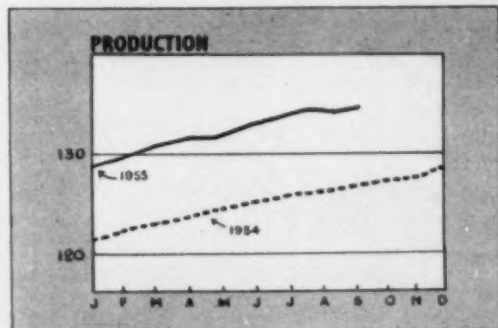
Weekly Wage index for October (31) was 153, being unchanged from September, but 9 points higher than a year ago. **Retail price index (32)** was 154 in November, being 2 points higher than in October, and 9 points higher than a year earlier.

'BUSINESS' INDICES

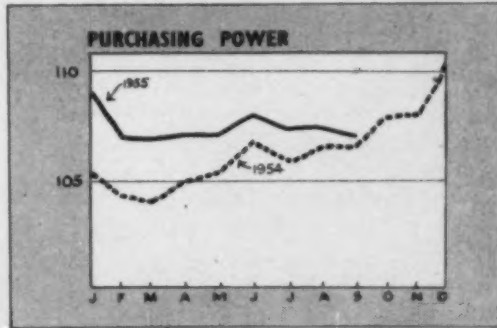
	Latest Month	Increase (+) or Decrease (-) on a Month Ago	Year Ago
1. Production (12-month moving average) 1948=100	* 133.6	+ 0.3	+ 7.5
2. Purchasing Power ... (do.)	* 107.3	- 0.7	+ 0.1
MANPOWER			
3. Total manufacturing industries (thousands)	9,374	+ 52	+ 245
4. Textiles ... (do.)	957	+ 3	- 44
5. Distributive trades ... (do.)	2,839	+ 23	+ 93
6. Coal (on colliery books) ... (do.)	699	- 1	- 5
7. Registered unemployed (G.B.) (do.)	† 226	+ 11	- 37
PRODUCTION			
8. Index of prodn.: total, all inds. 1948=100	* 137	+ 20	+ 4
9. Coal (average weekly output) (thousand tons)	4,623	+ 248	+ 25
10. Gas available at gasworks (average weekly output) ... (million therms)	54.7	+ 7.9	+ 3.0
11. Electricity generated (month) (million kWh)	7,022	+ 1034	+ 781
12. Steel ingots and castings (average weekly output) ... (thousand tons)	† 409	+ 10	+ 32
13. Cotton yarn ... (million lb.)	14.9	+ 1.0	- 2.6
14. Rayon yarn and staple fibre (month) (do.)	39.5	- 1.7	+ 0.6
15. Worsted yarn ... (do.)	* 19.9	+ 5.4	- 0.5
16. Sulphuric acid ... (thousand tons)	* 172.3	+ 18.9	+ 6.8
17. Passenger cars (av. weekly output) (thousands)	18.8	+ 0.5	+ 2.6
18. Commercial vehicles (av. weekly output) (do.)	7.2	+ 0.2	+ 1.3
19. Permanent houses completed (do.)	27.91	- 0.73	- 4.02
TRADE			
20. Value of imports ... (£m)	† 342.2	+ 8.8	+ 27.7
21. Value of imports, Dollar Area ... (£m)	* 71.1	- 3.4	+ 14.4
22. Value of exports ... (£m)	† 262.2	- 5.5	+ 60.3
23. Value of exports, Dollar Area ... (£m)	* 32.3	- 6.2	+ 5.0
24. Freight train traffic ... (thousand tons)	† 5.69	+ 0.27	- 0.03
25. Retail sale index ... 1950=100	147	+ 9	+ 16
FINANCE			
26. Currency in circulation ... (£m)	1,673	Same	+ 109
27. Deposits, London clearing banks ... (do.)	6,376	+ 31	- 233
28. Provincial cheque clearings ... (£,000)	750	+ 69	Same
29. National savings, total outstanding ... (£m)	* 6,132.2	- 3.8	+ 113
30. Gold and dollar reserves ... (do.)	† 815	- 5	- 229
WAGES AND PRICES			
31. Weekly wage rates ... 1947=100	153	Same	+ 9
32. Retail prices ... (do.)	† 154	+ 2	+ 9
33. Price indices of materials used in:			
Non-food mfg. industry ... 1949=100	† 153.1	+ 0.1	+ 9.0
Mechanical engineering ... (do.)	† 174.6	+ 1.4	+ 20.2
Electrical machinery ... (do.)	† 192.8	+ 3.1	+ 25.9
Building and civil engineering ... (do.)	† 139.8	+ 0.4	+ 6.7
34. Import prices ... 1952=100	103	Same	+ 2
35. Export prices ... (do.)	103	Same	+ 3

* September † November ‡ Four weeks to October 9th, 1955. All other figures refer to October

'BUSINESS' INDICES (1948=100)



A twelve-month moving average of the Official Index of Industrial Production (Total: All Industries).



An unweighted index of currency in circulation with the public, total bank deposits, and total outstanding national savings.



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BUSINESS

HOME MARKET

Regional Surveys

★ Midlands

Midlands

DIFFICULTIES in obtaining sufficient steel supplies are affecting regional manufacturers even more than current labour shortages. For some time the situation has been getting increasingly serious, and the problem, particularly as it affects small- and medium-sized firms has now been taken up officially by the Engineering Industries Association. Shortages being experienced by some 200 Midlands members are to be investigated in detail as a preliminary to an approach to the Board of Trade for assistance.

Although the U.K. steel industry's capacity has been increased by some 3 million tons since 1948, demand has outstripped supply, especially in requirements of angles, sections and light gauge plates. Deliveries of up to two and three years are being quoted, and the position is likely to be further aggravated in the future as new production methods enable the output of fabricated steel items to be stepped up.

Due to their inability to quote firm dates, some companies are finding themselves handicapped on the export side. It has been reported that lack of steel is preventing makers of petroleum equipment from delivering more than two-thirds of their plant and equipment on time. Although light foundries are less busy, following a contraction in the domestic appliance trade, the engineering and speciality foundries are working to capacity and are needing greater quantities of low and medium phosphoric irons than they can obtain. Re-rollers, with additional consignments coming forward and good orders from home consumers and stockists, are finding shortage of manpower a limitation on output.

To date, the credit squeeze has had little apparent effect on either production or employment, although there has been a slight downward trend in output of some consumer goods products. Pressure on machine tool manufacturers continues, however, and new orders are outstripping deliveries from the factories. The industry now has

★ North Western

an order book approaching £100 million in value, of which about one-quarter represents export work. Foreign competition, mainly on price, is being felt more keenly by electrical engineering firms, but they have been able to improve their delivery position. Home orders are satisfactory.

Farm machinery manufacturers are busy with new models and equipment, and are enjoying considerable success in overseas markets. Cycle output is rising and new firms are being attracted to the growing scooter market. B.S.A. are now in production with two models, and Hercules and Phillips are introducing new motorized cycles. A number of Midlands companies are sharing in the orders recently announced by the British Transport Commission in connection with the £1,200 million modernization programme. The contracts cover the supply of 141 main-line diesels and a number of power units, electrical equipment, etc. but altogether some 2,500 diesels are to be built.

Rising in step with the expanding motor industry production programme is the output of ancillary suppliers of components and accessories. New factory buildings and extensions carried out in 1955 are coming into operation, and many firms are currently re-designing their production flow and installing new capital equipment to meet the pressure of demand. Despite car firms' disappointment at the increase in purchase tax and the imposition of restrictions on Australian and New Zealand imports, individual companies are carrying through costly but cost-cutting expansion schemes.

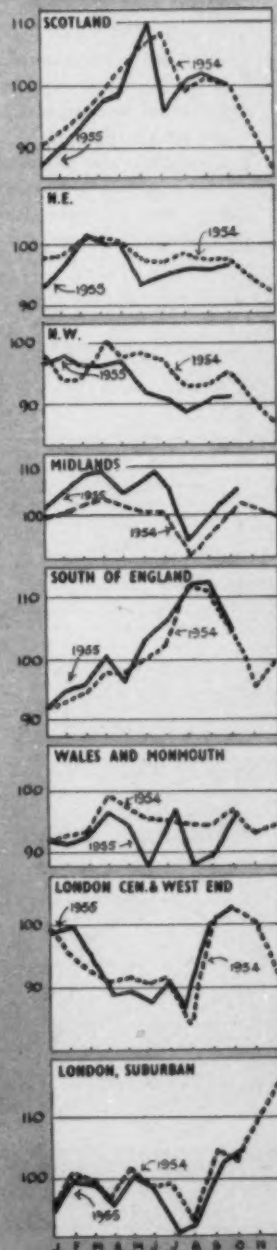
On the commercial vehicles side, export demand—which is brisk—is expected to continue. A disturbing

Continued on page 57

What the Charts Show ➤

Indices in the charts show retail turnover in each region in non-food merchandise as a percentage of national average (=100) for the month. They are based on Board of Trade retail sales indices.

REGIONAL RETAIL TRADE INDICES

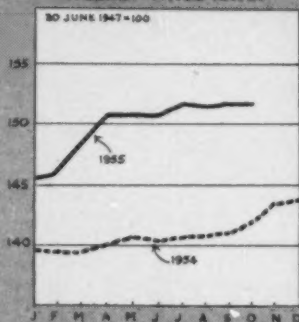


STATE OF THE NATION

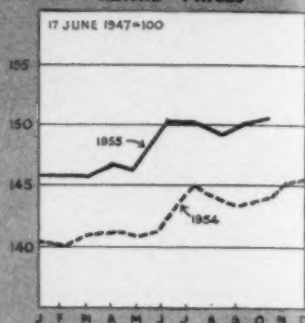
From this comprehensive series of charts, covering the main economic factors affecting the state of the nation, the businessman may gain a perspective of the situation governing his operations

WAGES AND PRICES

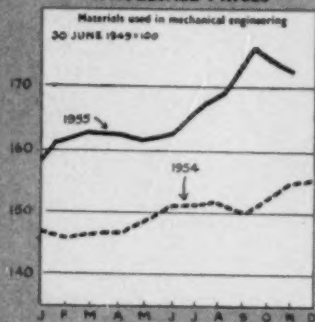
WEEKLY WAGE RATES



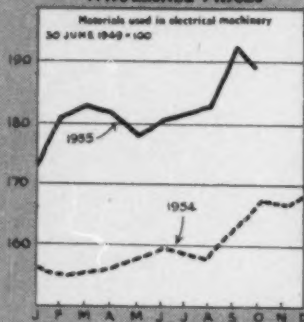
RETAIL PRICES



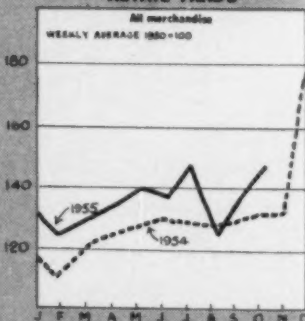
WHOLESALE PRICES



WHOLESALE PRICES

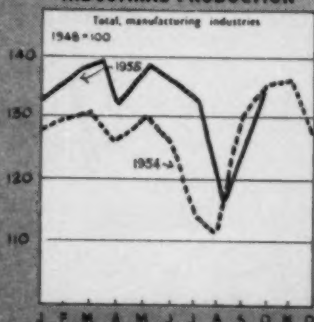


RETAIL TRADE

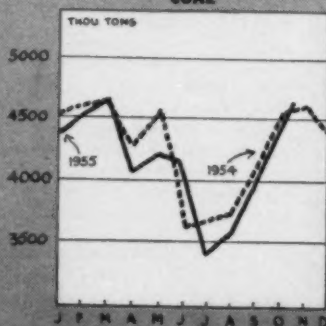


PRODUCTION

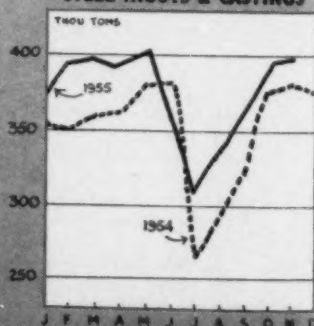
INDUSTRIAL PRODUCTION



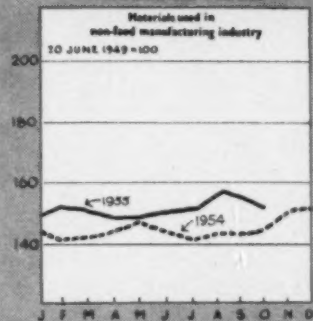
COAL



STEEL INGOTS & CASTINGS



WHOLESALE PRICES

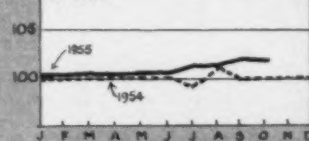


IMPORT & EXPORT PRICES

IMPORTS

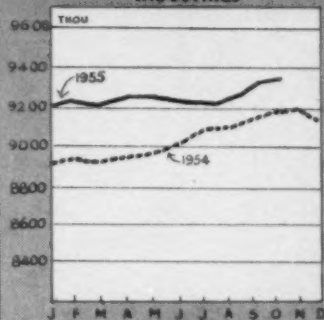


EXPORTS

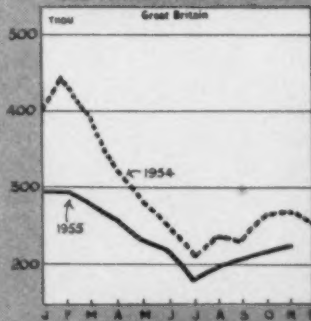


LABOUR

TOTAL MANUFACTURING INDUSTRIES

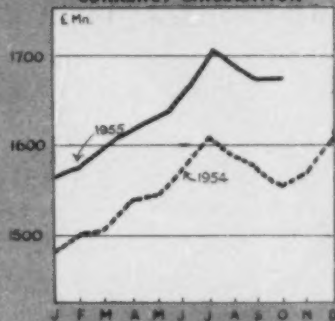


REGISTERED UNEMPLOYED

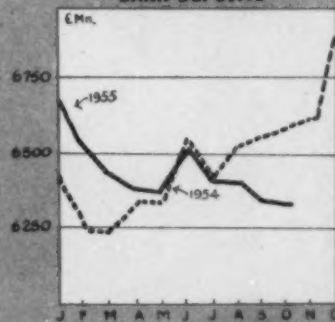


FINANCE

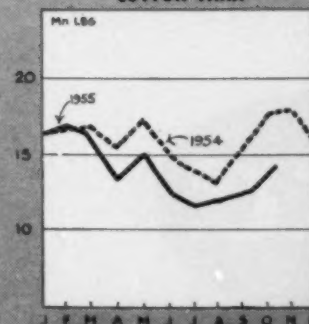
CURRENCY CIRCULATION



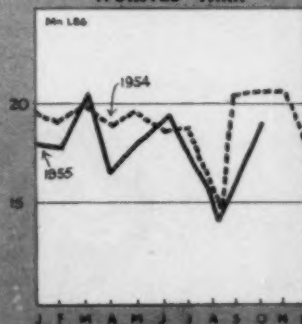
BANK DEPOSITS



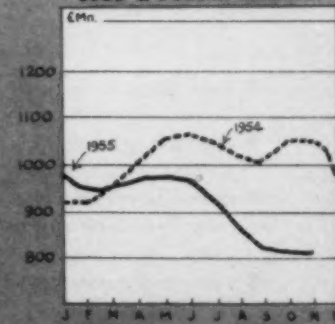
COTTON YARN

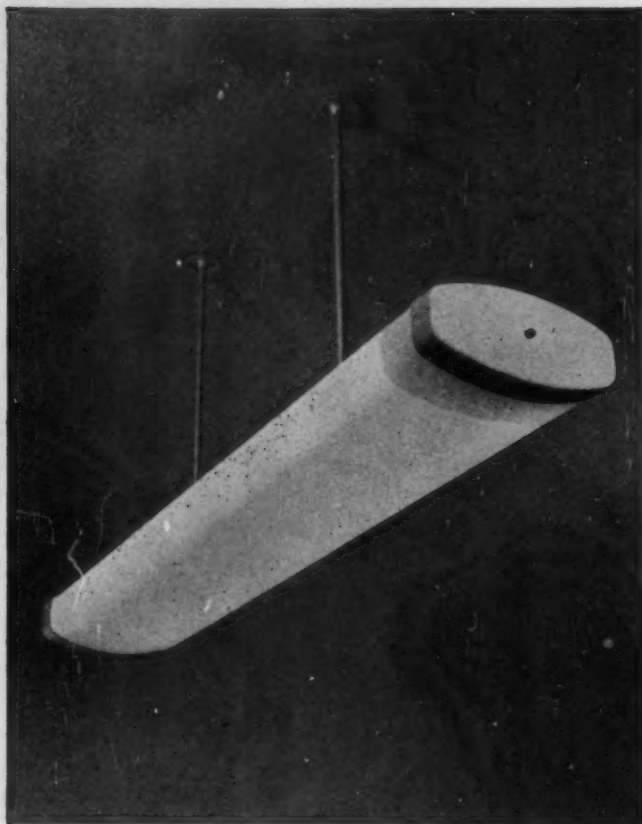


WORSTED YARN



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● *The General Electric Co. Ltd, Magnet House, Kingsway, London WC2*

HOME MARKET REGIONAL SURVEYS (cont. from page 53)

factor throughout the industry, however, is the rising cost of fuel, raw materials and wages.

Although production of Land-Rovers has been decreased, the Rover Co. are continuing with their general capital expansion programme. Complete revision of factory layouts to achieve more economical production, increase overall capacity and introduce new projects is to be undertaken by the Standard Motor Co. In their last financial year some £4.5 million was spent on new plant, equipment, dies, etc. and the group have outstanding capital commitments of £4 million.

As a result of a capital outlay of more than £1 million on tools and extensions, Jaguar output will be doubled.

Dunlop, Goodyear, Firestone and Michelin are the shareholders in a new £7 million company, the International Synthetic Rubber Co., and production, at an initial rate of 50,000 tons a year, is scheduled to start in 1958. Dunlop are now building at Fort Dunlop a £500,000 experimental synthetic rubber plant for the production of new special purpose qualities.

New plant is shortly to be installed in the new extension at the Graiseley Hill factory of the Wolverhampton Die-Casting Co. and production is expected to commence in the early part of the year. To meet rising demand, the aluminium casting plant capacity at the firm's Hollies works is to be further expanded; plans are also in hand for the erection of a new factory at Bloxwich.

Edge Tool Industries Ltd., Wolverhampton, report growing demand for technical services on their heat-treatment side and in the jig and tool manufacturing division, and announce that further developments are in hand to widen their scope in these fields. William Bate (Holdings), of Walsall, plan to expand the scheme introduced last year for providing customers, having a sufficient volume of business, with plant at their premises exclusively for the plating of their work. The plants are built, equipped and maintained by the company but customers have access to all matters concerning them.

Use of up-to-date equipment is enabling Smith's Stamping Works (Coventry) to increase their production with much the same labour force. To cater for larger forgings in special steels and

new alloys, the company are now installing additional plant worth £250,000. Progress is being made by Jury Holloware Ltd., Birmingham, in the manufacture of plastics hollowware. When sealing machinery now on order is delivered, Metal Closures Ltd., West Bromwich, will have spent nearly £150,000 since July 1954 on new plant: in the last trading year the company's export trade increased by more than 100 per cent in value.

Production of Wickman Ltd., the machine tool makers of Coventry, has been increased as a result of the installation of a number of new machines, and output will be further raised when a factory extension now in hand is completed.

New automatic production tools are to be made in the modernized Sentinel works, Shrewsbury, on which some £500,000 has been spent in the past two years.

The British Thomson-Houston Co. are in the process of moving their industrial electronics section from Rugby to a new factory at Braunstone Aerodrome, near Leicester. Initially, it will employ some 450 workers but the number is expected to grow to 750. With the commissioning of a new blast furnace at the Derbyshire works of the Renishaw Iron Co., the company's output has been doubled. With ancillary equipment it has cost £250,000 and is the second stage in a £500,000 improvement scheme due to be completed this year.

Part solution to the problem of finding key technical personnel to man their new foundry near Melbourne, Australia, has been found by Allied Ironfounders Ltd., of Ketley, near Wellington. One party of 25 employees, including their families, has already sailed for Australia, and a second party of 25 selected workers will follow later.

Reconstruction of the Adamant fire-clay works of Twyford Ltd., sanitary potters, Stoke-on-Trent, has involved the mechanization of the making and glazing departments and the installation of a sixth tunnel kiln. This should result this year in economies in manufacture, together with an increase in fireclay output. With an eye to future expansion the company have bought land on the outskirts of Alsager, eight miles from the head office and works at Stoke-on-Trent. Wright Saddle Co., of Birmingham 5, are planning the erection of a new factory

and offices on a site in Windsor Road, Redditch.

Development has not been confined to capital goods industries. New works are now being completed for Dryad Ltd., handicraft materials and equipment suppliers, Leicester. Within the next two years the Carpet Manufacturing Co. are to spend £290,000 on development schemes, including new spool Axminster machinery and modernization of the woollen spinning department.

Shortage of engineers—a matter of concern to all engineering industries—lends urgency to plans to expand facilities for higher technological education. Important in this connection is the new Birmingham College of Technology which the Queen visited recently and which, when completed this spring, will fill about half of the space to be occupied by the three colleges of technology, commerce and art. The cost of the new buildings, excluding furniture and equipment, will be about £3.6 million.

Now in operation at the Armstrong Whitworth works at Whitley, near Coventry is a new £200,000 supersonic wind tunnel. Around a new 1,000-ton capacity press—only one of its type in Europe—at the Melton Mowbray headquarters of the Production Engineering Research Association is being erected a new £200,000 workshop block, including metallurgical and metrological laboratories. Supplied to the Association under American conditional aid, the press will be used for research into impact extrusion.

North Western

ALMOST all sections of the engineering trade are very busy, with full employment prevailing. Shortages of skilled workers—tool makers, operative engineers and designers—continue, and delays are being experienced in obtaining various types of steel. A good deal of export business is being done, but there is some anxiety for the future here in view of the effect of further wage increases on prices.

Electrical equipment firms are well employed, with a number of large contracts, and diesel engine manufacturers are active over a wide range of units. As a result, small engineering concerns in the area making engine casings and parts are busy with orders. Automation in its many forms is

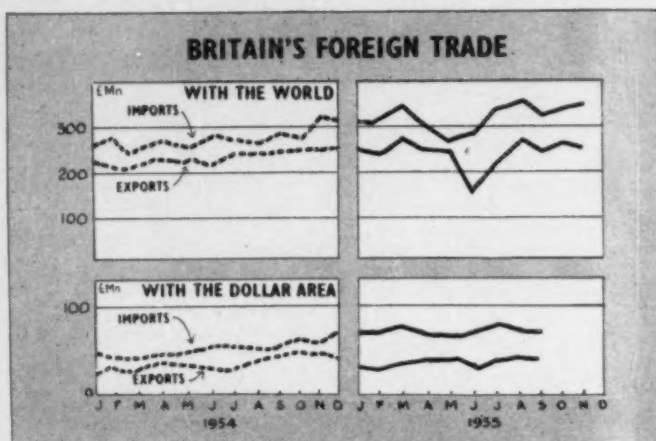
stimulating the production of a multitude of **instruments, valves and electronic units**, and North-Western firms are finding a fruitful field in these lines. Production is being expanded and, in many cases, departments dealing with these devices are being rehoused in extended form.

Not even in the recession of 1952 did the manpower total in the **cotton spinning** industry fall below 100,000, but that situation has now been reached and underlines the gravity of the problems facing the industry. In the past 12 months, some 70 mills have closed, and the labour force has declined by 30,000. In the past two years the Operative Spinners' Amalgamation has lost some 25 per cent of its membership. Some three-shift working may begin in cotton weaving mills. Important talks on the future of the industry, initiated by the Cotton Board, were held at the beginning of December and are to be continued soon. The 35 representatives who took part in the talks represented all sides of the cotton textile industry.

There is growing support for the view that a central concerted plan should be prepared and carried out to enable Lancashire to meet stiffening foreign competition for textile business with its most modern and best-equipped mills, unhampered by older and more out-of-date plants. In such a complex industry, however, any scheme for regulated contraction, the establishment of "verticalization" and major re-equipment may be expected to run into many difficulties. But time is short and there is need for bold decisions in the next few months.

Nevertheless, as J. R. Whinfield, of Terylene fame, remarked recently: "It behoves the textile industry as a whole to secure the greatest possible advantage" from the inventive spirit which is now awakening. "Research, and ever more research, with the inventive spirit as the key, is the route to material advance."

The importance of seeing that the results of research were absorbed by industry was stressed by Sir Raymond Street, the chairman, at the annual meeting of Shirley Developments. Sales of Shirley instruments had risen, as had also income from royalties, commission and fees reflecting the sale of Shirley inventions by licensees, and this, he said meant that the company, which was formed in 1952, was "running a business responsible for **selling science to industry** in the year under review to a value now substantially



over £100,000."

Horrockses Crewdson and Co., for one, believe that although cotton has not lost its pride of place as a raw material for the manufacture of wearing apparel or household goods, there is scope for development in fabrics made from **synthetic fibres**; and the company are carrying out extensive research in this direction.

Motor and Electronics Corporation, who have enlarged their two Huyton factories within the last two years, are planning a further separate extension there of some 50,000 sq. ft. to deal with the expansion in the activities of their **electronic and vacuum divisions**. In attempting to reduce delivery times, the company's guiding principle is to increase the horse power per man employed.

Among current research being undertaken by Simon-Carves Ltd. at Cheadle Heath is work on the development of a process to produce **smokeless solid fuel**, and also on plant for the removal of sulphur from power station flue gases. The company's chemical plant department is also at present developing large electro-precipitators for removing pulverized fuel dust from such gases.

Nearly doubling its manufacturing capacity, the Barton Dock Road, Manchester, factory of Massey-Harris-Ferguson is being increased by 150,000 sq. ft. To date, 16,000 **Ferguson implements** have been made there, and this year the number produced will reach some 25,000, including the new tipping transporter and the kale "Cutrake." Mather and Platt, of Manchester, are to produce at their

Radcliffe factory a range of **packaging equipment** marketed by the Standard-Knapp division of Emhart Manufacturing Co., of the U.S.

The new Worsley factory of British Oxygen is the largest composite plant yet built by the company for the production of **industrial and medical gases**. Oxygen, nitrogen, argon, dissolved acetylene and nitrous oxide are manufactured, and the entire north-western area is served. Production of **P.T.F.E. polymer** at I.C.I.'s Hillhouse, Lancashire, factory, is to be stepped up to 200 tons by the autumn. A new extrusion grade and a range of special dispersion grades are to be made.

The new factory of Thames Board Mills at Warrington, now being built, is expected to commence production of **corrugated fibreboard cases** next year. It forms part of the company's £9 million expansion programme. Rippingilles Ltd., the engineers and stove manufacturers, are purchasing a factory in Lancashire with a view to easing production problems. A large part of the Southport works of Brockhouse Engineering (Southport) is being taken over by Powers Samas Accounting Machines who hope to employ around 1,000 operatives on the production of their range of equipment.

First stage of the new AC-Delco plant now being built at the Liverpool Kirkby Industrial Estate will cover 250,000 sq. ft. and cost over £2 million. **Automotive and electrical products** will be manufactured there. New 30,000 sq. ft. premises of Plastocraft Products (Darwen) Ltd., Spenbro Works, Darwen, will enable output of **plastics handles and door stops** to be increased.

EXPORT MARKET SURVEY—The Netherlands

HOLLAND is, *par excellence*, a trading nation, depending very considerably on exports of goods and services, and vulnerable, in consequence, to shifts in world economic conditions. With a population of some 10 million which, allowing for net emigration, is expanding by about 1 per cent a year, continued industrialization and increased productivity are essential.

Remarkable progress has been made by the Dutch since the dark days of 1945, when only 60 per cent of productive capacity remained intact. Road and rail systems have been renewed, harbours repaired, 350,000 new houses built, and industrial and agricultural production rehabilitated.



Success of the Netherlands' agricultural and horticultural policies has come largely from their system of intensive cultivation—a plan virtually forced upon a country whose total cultivated area is only equivalent to about half an acre per inhabitant. Today, there are flourishing dairy and cattle and pig breeding industries, while the cultivation of fruit, flowers and bulbs occupies over 80,000 people.

On the industrial side equal strides have been made. A number of basic needs are met from home production—oil from Royal Dutch, fats from Unilever, rayon from AKU, electronics and radio equipment from Philips. There are blast furnaces and steelworks and the Dutch coal mines turn out over 12 million tons of coal annually. It is estimated that within 20 years all coal will be required for production of electricity. This underlines the importance of the decision to establish the Netherlands Reactor Centre at a cost of £2.8 million. Shell's new plant at Pernis, near Rotterdam, which will manufacture epichlorhydrin—key ingredient of epoxide resins—will be in operation this autumn. Holland is now the world's third largest shipbuilding country, and shipyards are almost fully booked with orders for the next four years. Among them is a £21 million Greek contract for 21 diesel-powered dry cargo ships.

Despite the wide variety of Dutch industrial products there is a good market in the Netherlands for such goods as tools, machinery, labour-

saving plant, cars, commercial vehicles, farm equipment and building materials, as well as many consumer goods. Holland, which before the war took only 2.8 per cent of the U.K.'s total exports, increased this percentage to 3.7 in 1954 and is now very nearly level with Eire as Britain's most important European customer.

For the first nine months of last year Dutch imports from this country aggregated £78.9 million, compared with £75.4 million for the corresponding period of 1954. Over 90 per cent of imports are liberalized, but there is growing need to study market requirements closely. Foreign competition is increasing, particularly from Germany, and the Netherlands' common tariff policy with Belgium means that goods may circulate freely within the area. Exporters should consider the advisability of showing at this year's Utrecht Spring Fair. Its 40th anniversary is to be celebrated, and the exhibition area will be 100,000 sq. ft. bigger than in 1955.



In the past two years the Netherlands Government have pursued a markedly expansionist policy, buttressed by the country's strong competitive position in world markets and large surpluses on current external account. There has been an upsurge in home consumption, and at the same time a high rate of fixed asset formation. Dutch foreign lending, too, has been growing—in the first nine months of 1955 it totalled around £26 million, a big advance on the previous year.

The position today is, however, altering, and the vulnerability of the Dutch economy was pointed out by the Finance Minister when introducing the 1956 Budget. There is a growing labour shortage. Also, concern is felt in the fact that 70 per cent of the country's exports go to other European countries. Nearly 3 per cent of the budget is to go on industrialization projects, including capital investment to supply natural gas to the Central Netherlands from regions where there is a surplus. Around 400 million guilders are to be spent on transport and waterway schemes. Some preliminary work is to be done in connection with the ambitious Delta Plan

recently submitted to Parliament.

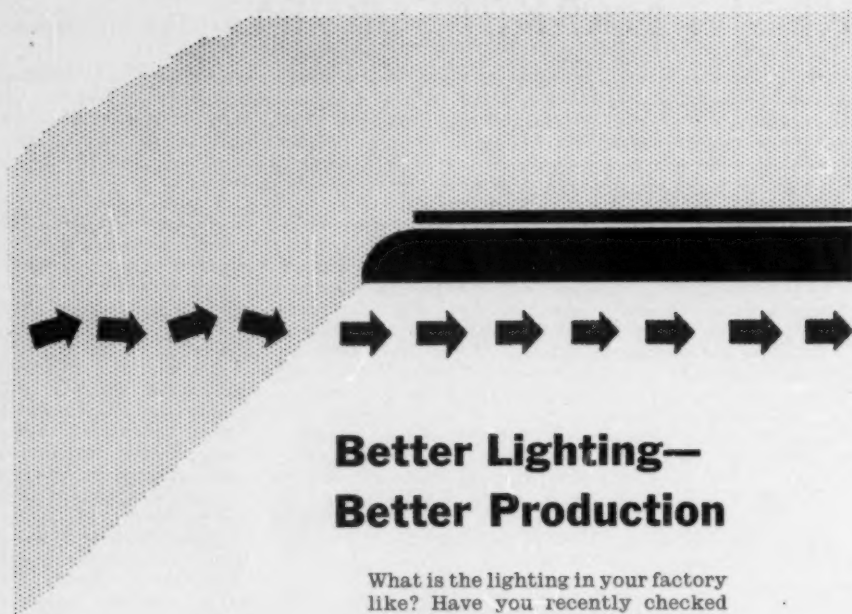
This Plan, which will take 25-30 years to complete and will cost 2,400 million guilders, calls for the construction of seven dams and secondary works. The whole coastline will be changed, and instead of a great number of minor estuaries there will remain open to the sea only the Nieuwe Waterweg, which links Rotterdam to the North Sea, and the Western Scheldt, which is the sea approach to Antwerp. Apart from shortening the coastline by several hundred miles, the Plan will help to increase the country's safety against heavy storms and create great reservoirs of fresh water for agriculture.

Particular attention is being paid in industry to the manufacture of high-quality products and the heightening of the level of workers' skill. In future, says the Minister of Economic Affairs, the accent should increasingly be laid on "vertical" investments—more capital per worker—rather than on the earlier "horizontal" targets of investments to provide employment for additional numbers of workers. Annual increase in the gross national product, which was 5 per cent in 1954, is expected to fall to some 2 per cent this year.



Since the war, the number of subsidiaries of foreign concerns established in Holland has reached a total of 74, and the number of those in which there is joint participation between Netherlands and foreign ownership is 103. Negretti and Zambra, London, are to establish an assembly plant for their scientific instruments at Zeist.

Holland's developing overseas territories must not be overlooked as potential future outlets. Surinam (formerly Dutch Guiana) and the Antilles are, of course, co-equal parts of the Netherlands Realm, and a number of schemes there and in New Guinea are currently being carried out in order to improve production, education and social services. The territories produce bauxite, agricultural products, oil, phosphate and various minerals. The Government of Surinam have an £8 million plan involving the construction of a dam on the Surinam River, a hydro-electric installation and an aluminium factory with an output of 40,000 tons a year.



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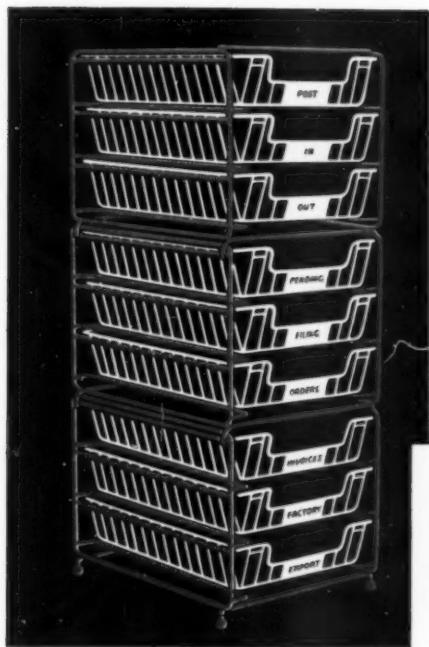
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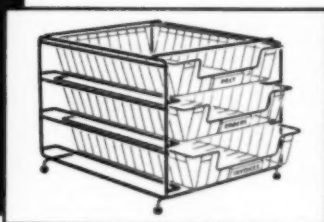
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JANUARY, 1956

● PUNCHED CARD AUTOMATIC SELECTION

● DUPLICATE AND SINGLE PRINTERS

● AUTOMATIC SUCTION FEEDS

● DOUBLE COLUMN LISTERS

● WRAPPER ADDRESSERS



Better Lighting— Better Production

What is the lighting in your factory like? Have you recently checked the lighting level round the works with a light meter?

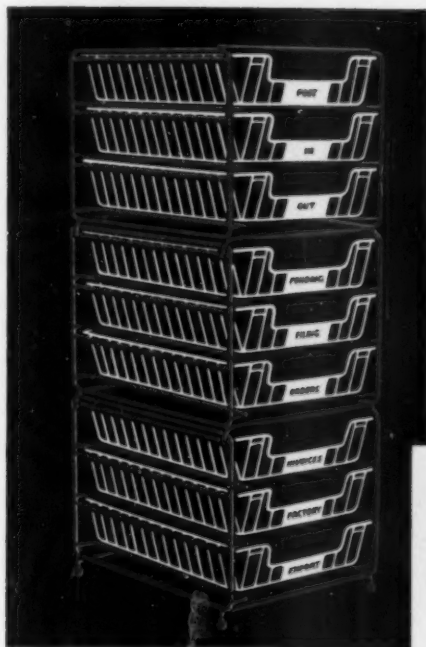
The *right* lighting has a significant effect on the speed and accuracy of production. When its strength, position and type is suitable for each job the craftsman can give full play to his skill, and the works engineer can do full justice to his shop.

Good lighting is only one of the many ways in which electricity is playing a vital part in the drive for higher productivity.

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No more untidy desks

No more sorting through reams of papers for that important letter. Stand a Stabilux Tray set on your desk. It takes up little more room than a sheet of foolscap—keeps papers in clearly defined trays, labelled at each end. For added efficiency the trays draw out both ways.

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Finished with stove enamelled cream trays. The frames are available in red, blue, eau-de-nil, or dark green.

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"BUILD-UP"
TRAY SETS

Price including Purchase Tax 43 2d. Obtainable through your usual office equipment supplier or in case of difficulty write direct to:—
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HAYWARD LIMITED

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JANUARY, 1956

● PUNCHED CARD AUTOMATIC SELECTION

● DUPLICATE AND SINGLE PRINTERS

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● WRAPPER ADDRESSERS

How one man solved a double problem for a famous department store

Mr. H. T. Tipping, the Burroughs man (on the left), discusses with Mr. Ambler, Director and Secretary of Schofields, the new system, based on Burroughs equipment, that they worked on together for speeding the preparation of customers' monthly statements.



TO Schofields of Leeds, mailing monthly statements promptly to customers became a pressing problem in their constantly expanding business—moreover, filing space for sales dockets took up large areas of valuable shelving.

They called in Mr. Tipping, of Burroughs, who, together with Mr. Ambler, Director and Secretary of Schofields, worked out a comprehensive plan based on Burroughs equipment, including Microfilm.

Now Schofields' statements go out proven, accurate and complete on exactly the right day throughout the month in a regular cycle.

The new statement is as modern as the equipment—instead of an abbreviated extract of debits and credits, the customer now gets the full story of each transaction, together with a summary giving all charges and credits, whilst Schofields have more accurate information on their accounting position, a considerable saving in staff and space and the great benefit of having satisfied customers paying their accounts regularly and early with the minimum of queries.

Whatever your business, if you have an accounting problem, the Burroughs man can help you.

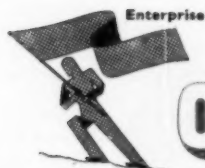
Backed by Burroughs' world-wide experience, he will make a full analysis and suggest the most economical, *workable* solution. If he thinks no change advisable, he will say so; if he does recommend a change, he will make a detailed plan and help you get it working smoothly. Call in the Burroughs man—you're committed to nothing. His advice is free.

Burroughs make the world's widest range of business machines. You'll find your local Burroughs office in the telephone book.

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FOR SPECIALIST ADVICE ON MODERN ACCOUNTING METHODS

CALL IN THE **B**urroughs MAN



COMMENT

AWARDS OF DAMAGES

AN alarming legal judgment, with serious implications for business executives, was given by the House of Lords in *British Transport Commission v Gourley* on December 8. The respondent, a chartered civil engineer, had been involved in a railway accident in 1951, and suffered severe permanent injuries. He claimed compensation for loss of earnings.

The Judge of the First Instance and the Court of Appeal had rejected the contention that account should be taken of the income tax and surtax which he would have paid if the amounts claimed had been earned by the respondent. But the House of Lords took a different view. Their Lordships said that the broad principle was that the Tribunal should award such a sum of money as would put the injured person in the same position as he would have been if he had not sustained the injuries.

So far as the assessment of damages for pain and suffering and impairment resulting from injuries was concerned, the Court could do no more than arrive at a fair estimate. But when it came to assessing compensation for the financial loss resulting from the accident, the injured person should be placed in the same financial position as he would have been had the accident not happened. His earnings would have been subject to income tax, and, in appropriate cases, to surtax. Hence, the tax position must be taken into account.

In this case the amount of damages originally awarded for loss of earnings was £37,720, and this was accordingly reduced to £6,695.

The payment of the first part of a damages claim—for pain and suffering—is regarded as a tax-free capital sum. Likewise the Inland Revenue have treated payments of compensation for loss of office as a tax-free capital sum. It is an unnecessary complication for the law to regard the second part of a damages payment—that compensating for loss of earnings—as income. It is also a great blow to the economic status of business executives. In the course of their work they have to make risky decisions which can make or mar their careers. And many have to travel extensively—at risk—in the course of their duties. At present rates of income tax and surtax they have relatively little opportunity to save.

In the past they had some measure

of protection against misfortune—either physical or occupational—through their right to claim compensation for loss of earnings, as a capital sum. Now, in one legal judgment, that right has been taken away. The law should be changed to restore the position.

★ ★ ★

THE February issue of *BUSINESS* will be specially enlarged to cover the Business Efficiency Exhibition at Birmingham, which will be held from February 20 to 25. In order to include the latest information about new products, the issue will not come out until the end of the first week.

★ ★ ★

NO COMPLACENCY

NO sales executive can ever feel complacent in a company which has a good market research unit that is continually seeking out further opportunities. An example of the type of startling fact uncovered by market research was given recently by Alastair Sedgwick, director in charge of publicity of Gillette Industries, in an address to the Royal Society of Arts. In 1948 the company analysed the Italian market for razor blades and were struck by the fact that although the population, 46 million, was nearly as great as that of the United Kingdom, sales of razor blades were less than one-fortieth of the British figure.

Market research discovered that "in Italy less than one man in ten shaves every day." Nearly three-quarters of the Italian male population shaves less than three times a week, and one-third of Italian men are shaved by a barber

The Editor, the Advertisement Director and the staff of *BUSINESS* wish all their readers and advertisers happiness and prosperity in the New Year

at a cost varying from 40 to 70 lire. As one of the company's blue blades would cost only 25 lire, and would last for several shaves, the market survey clearly indicated that selling blades to the Italians meant teaching them how to save money.

The company developed a series of strip cartoons for "humorously shaming" the Italians into shaving, by portraying the sort of situation in which private love life does not go well until young Romeo takes to regular



ALASTAIR SEDGWICK

Some startling shaving statistics

shaving. An article on page 73 of this issue presents case histories of firms which are competing successfully overseas against the Germans, and one story describes in some detail what Gillette are doing to popularize shaving—in some cases even teaching the natives how to shave.

★ ★ ★

SIR HAROLD GILLET, chairman of William Whiteley Ltd., the Bayswater store, was very frank to admit recently that the company had lost more than £100,000 through defects in their accounting system. That was before the introduction of the new credit control system described in an article on page 113 of the January 1955 issue of *BUSINESS*.

★ ★ ★

EXECUTIVES' HEALTH

A RECENT survey by the Commerce and Industry Association of New York suggests that executive health programmes (described in the March, 1955, issue of *BUSINESS*, page 75) are becoming more and more popular in the U.S.A.

The survey covered 319 New York firms, employing a total of approximately 250,000 people. Four out of every ten of them provide periodical medical examinations for executives;

WHY has the
EMIDICTA DICTATION SYSTEM
 become pre-eminent
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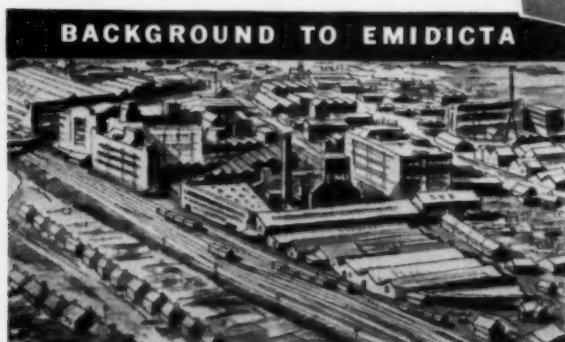
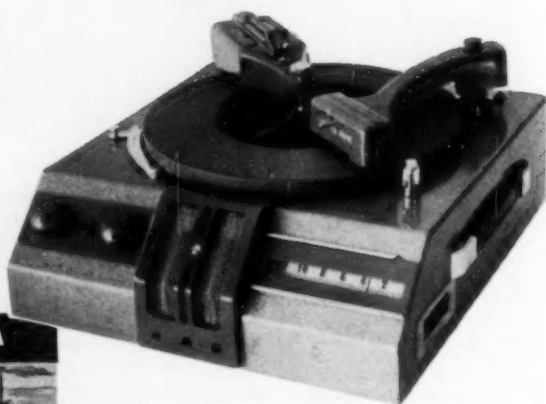
FACT 1 The Emidicta dictation system is specifically designed to speed the work by speeding the letter.

FACT 2 The Emidicta dictation system includes a concise range of models to meet all normal needs.

FACT 3 The Emidicta dictation system has been consistently proved a *prudent investment*, not an expensive luxury.

FACT 4 The Emidicta among all other dictation machines is notably uncomplicated.

FACT 5 The Emidicta Dictation System is that most often selected by business organisations after careful comparisons.



The Emidicta has the finest possible 'sound' pedigree—it is made by E.M.I. ("His Master's Voice", Marconiphone, Columbia, etc.) And is the outcome of half a century's experience in sound recording and reproduction.

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E.M.I. SALES & SERVICE LTD. **Emidicta Division** (Dept. 4), "His Master's Voice" Showrooms, 363-367 Oxford Street, London, W.1. Telephone: MAYfair 8597. GROsvenor 7127 8.
 Northern Branch Office: Regent House, Cannon Street, Manchester (Deansgate 2315)
 Also Sales Offices: Birmingham (Midland 5821), Glasgow (Douglas 6061). E.M.134

another three out of every ten are thinking of doing so. The remainder are mostly small firms, employing on the average about 250 people.

In only 21 per cent of the schemes reported are the examinations compulsory. Among the voluntary schemes, the degree of participation by eligible personnel ranges from 100 to 10 per cent. The average is remarkably high—nearly 80 per cent—which implies that many of the 20-odd firms favouring compulsory examinations would have got an equally good response without employing dictatorial methods.

Few of the schemes are restricted to top executives. More than 100 of them (86 per cent) cover middle management as well; 48 per cent include 'front-line' supervisors, and 38 per cent extend to key workers below the rank of supervisor.

★ ★ ★

In nine out of every ten schemes neither age nor salary restrictions are imposed. Among the ten per cent which favour age limits, the greatest concentration is, inevitably, on men of 40 and over.

The survey also indicates:

1—Examinations are usually given every 12 months.

2—Almost invariably the cost of each examination, regardless of the way in which it is conducted, is borne by the company. Only one of the 319 firms expect their executives to pay it all.

3—Examinations are conducted by outside clinics (38 per cent); the company's own medical centre (26 per cent); private doctors chosen by the company (22 per cent); and doctors chosen by individual executives (less than one per cent). The remaining 13 per cent use some combination of the first three methods.

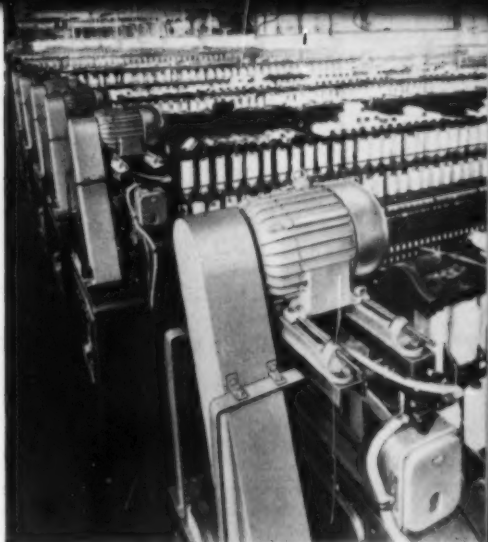
Whether the results of company-sponsored medical examinations should be disclosed to the management is always a controversial issue. Forty-two of the firms covered by the New York survey expect to see the doctors' findings. In only a few cases are the findings withheld from the men concerned.

For what purpose are the examinations given? The survey reports a number of reasons. Nearly one-third of the firms stated that the schemes were regarded as a measure of checking incipient trouble. Another 30 per cent replied: "For the executives' own benefit." Twelve per cent specifically

JANUARY, 1956

People Products Places-I

CHEAPER CHANGES—Individual motor drives replace the line shafting formerly used in the ring-spinning room of the Leather Cloth Co.'s London factory. The new system saves time and money, since pulleys can be changed in a few minutes when different machine speeds are required, and only the machine concerned need be stopped. In the past, changes had to be made at the end of a working period.



HOME INFLUENCE—G. M. Bassnett, Lancashire-born president of Coles Cranes Inc., Illinois, U.S.A., recently visited the parent company, Steel and Co. Ltd., Sunderland. Wishing to bring himself up-to-date with the Sunderland works' manufacturing techniques—which will undoubtedly influence his ideas when planning new developments at the American plant—he was particularly impressed by their flow-production methods.



NEW HOME—BUSINESS and its associated journals have a brand-new home—Mercury House, 109-119 Waterloo Road, London, S.E.1. An extension, to be built this year, will increase the floor-space from 32,000 square feet to about 48,000 square feet. Here is an artist's impression of the building as it will look then; an article describing some of its distinctive features will appear in the March issue of BUSINESS.

P.P.P. Continued ▶

TIME CONTROL AND SYNCHRONISED CLOCKS				
	Fully Automatic Time Recorder	9 in. dia. general purpose Clock	Office Clock	Job Time Recorder
				
	Boardroom or Reception Room Clock	8" dial Insertion type Clock	Surface mounted Clock, suitable for Works, Offices, etc.	Combined Clock and Loudspeaker
INTERNAL TELEPHONES				
	Faxmaster Loudspeaking Master Station	P.A.X. Desk Instrument	Directaphone Loudspeaking Master Station	Simple Interroom Desk Instrument

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Originally designed to meet a Subscriber's specific need it is now available for the benefit of Industry generally as one of the TR Services. You are invited to send for full details of this new time saving equipment.

*TR SERVICES are available on a rental basis. Details of any of the above equipment will gladly be sent on request.

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mentioned promotions and retirements.

And the cost? For each examination by an outside clinic or private doctor, the firms pay sums ranging from 25s. to about £100. The average is in the region of £16.

★ ★ ★

THE Board of Trade has available for free distribution a small pamphlet on "Helping the Exporter" which describes the aid that British firms selling overseas may receive from Foreign Service officers and Trade Commissioners, in selecting local agents and professional advisers, and in other services.

★ ★ ★

TWO VIEWS

IN a recent series of lectures at the Polytechnic, Regent Street, on "Leadership in the Twentieth Century," Col. L. Urwick has continued the Battle of Business Training. He quotes Elton Mayo as saying that: "We have failed to train students in the study of social situations; we have thought that first-class technical training was sufficient in a modern and mechanical age. We are technically competent as no other age in history has been; and we combine this with utter social incompetence."

Later Col. Urwick makes the charge that "those who exercise the formal, the legal authority, in our economic life, have become so far divorced from the effective leadership of their employees that the very title to leadership has publicly and popularly been conferred on another group. The phrase 'the men's leaders' means not those who should be leading the workers in the accomplishment of daily work, but trade union officials who organize them to advance their own claims Since these 'men's leaders' admit no responsibility for the effective ordering of the economy in the interests of the community as consumers this struggle is one in which there can be no victory for either party, but only a progressive disintegration of economic life from which all will suffer alike."

By contrast with this depressing picture of industry inadequately staffed with leaders "trained in the study of social situations," there is the equally depressing picture of industry short of scientists and technologists. A recent "Report on Recruitment of Scientists and Engineers by the Engineering Industry" (H.M.S.O., 1s. 3d.), and a

People Products Places-2

FLEXIBLE LIGHTING—

Special lighting system at Littlewoods' new store in Church Street, Liverpool, follows some of the latest Continental developments. It is composed of a mixture of tungsten and fluorescent lighting, with ceiling panels which can be moved to fit in with new counter arrangements. Spotlights, built unobtrusively into the ceiling, pick out specific displays of merchandise.



INSURANCE MAN—

Dr. D. M. Tombs, 47-year-old New Zealander until recently senior lecturer in Telecommunications at the Imperial College of Science and Technology, London, heads a new research department set up by Hoover Ltd. Its function is to "harness" electronic and other scientific discoveries for use in Hoover products to be developed in the years to come. Describing the new department as a "form of long-term insurance," the company emphasizes that it will supplement, not replace, the work of their existing development engineers.



BIG HAND—This 44ft. by 17ft. 6in. sign is believed to be the first illuminated display incorporating mechanical movement to be erected in Piccadilly Circus since World War II. Driven by an electric motor, the pivoted hand unit is nearly 23ft. deep and weighs about half a ton. While a 1,000 watt beam passes through an arc at the top of the sign, the "batteries" light up intermittently.

P.P.P. Continued ►

The Automatic Office

—built by LEO Computers Limited

—deals completely with all

accountancy and clerical work including

payrolls, sales invoices, stock control,

branch ordering and delivery.

LEO saves time, money and manpower.

LEO gives management all vital statistics.

LEO COMPUTERS LIMITED

AN EXAMPLE:—PAYROLL Since July 1955, one large organisation has relied entirely upon LEO to produce each week the payroll for a staff of over 10,000. All calculations, deductions, and adjustments are carried out in one operation, including P.A.Y.E., the printing of pay slips and a full detailed analysis for accounting and cost accounting purposes.

ELMS HOUSE LONDON W. 12

pamphlet on "Graduates' Jobs" (P.E.P., 2s.) have both emphasised this shortage.

However, on the brighter side it should be appreciated that the shortage both of "human" leaders and of technically-trained leaders is a sign of prosperity and of industrial progress. It is changing techniques which cause most of the industrial problems and increase the demand for leaders who can understand the workers and win their loyalty. It is also technical progress which puts the scientists and engineers in such demand.

No business leader can afford to wait until the shortage of either type of leader is overcome. On the contrary, success lies waiting for those who are already aware of the shortages and are making the most of existing staff—or of existing recruiting and training facilities.

★ ★ ★

RESEARCH FACILITIES

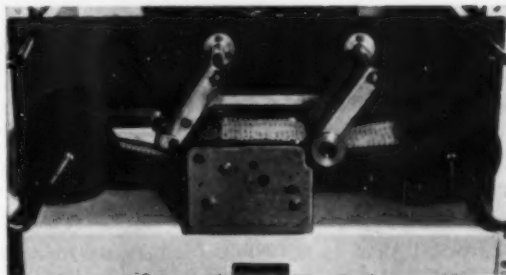
THE first of two articles describing research facilities available for helping British industrial firms, appears on page 91 of this issue of *BUSINESS*. Much of the attention of these articles is concentrated on the work of the Department of Scientific and Industrial Research, the National Physical Laboratory and other public or semi-public bodies.

Quite naturally, the results of any research conducted by such bodies become public property, available to all firms equally. Hence a firm which wants to develop a new line of research for private exploitation may hesitate to ask a public body for assistance. The position is, however, very different with the private research institutes whose services are available to industry. The results of any research they do for a sponsor are confidential, and are the private property of the sponsor.

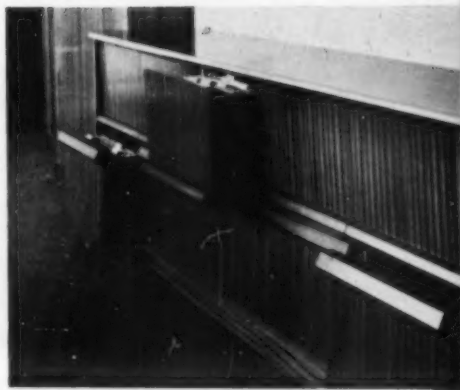
A Picture Story in the December 1954 issue of *BUSINESS* (page 84) described the type of work done by the Fulmer Research Institute at Stoke Poges, Bucks. Another private organization which does sponsored work for client firms is Sondes Place Research Institute, at Dorking, Surrey. The work includes laboratory research, pilot plant development and plant design and prototyping. It is understood that some of the leading American research institutes also intend to establish themselves in this country in the not distant future.

People Products Places-3

AUTOMATION IN ACTION—Laurence, Scott and Electromotors Ltd., Norwich, have installed what is believed to be the first fully automatic electronic method of controlling machine tools to be used outside the manufacturers' own establishments. Design data, in the form of a table of co-ordinates, are encoded on punched tape and (as shown below) fed into a control unit which deduces the movements which should be made by the cutting tool and rotating worktable of a standard copy-milling machine to produce the desired profile. "Instructions" are then passed to the servo motors controlling the respective feeds. Developed by E.M.I., the new system can be applied to a wide range of machine tools.



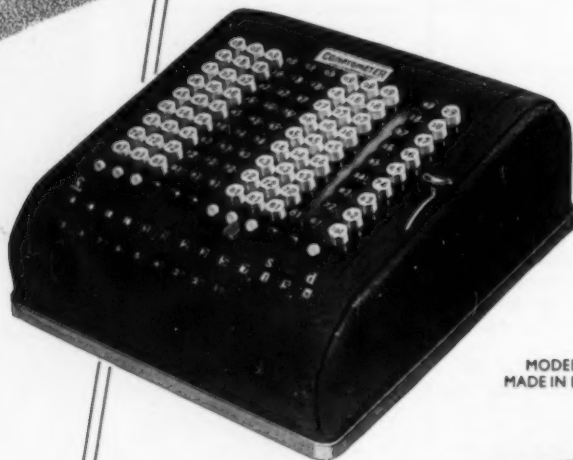
INVISIBLE FILING—Documents are close at hand—but out of sight—in managing director J. M. Laing's office at the new headquarters of John Laing and Son Ltd. This elegant filing unit, in Sapele mahogany, matches other specially-designed furniture supplied by Heal's Contracts Ltd. The carpet is forest-green, and the chairs are upholstered in cream hide.



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Employment
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Schools in every
big town

TALKING POINTS

TELEPHONE WIRES

Why must they be unconcealed?

AS will be seen from a picture and caption on page 65, *BUSINESS* and its associated publications have recently moved into a new building. In a subsequent issue of *BUSINESS* we propose to publish a Picture Story describing the various architectural features incorporated in the building, and how they improve working efficiency. However, the purpose of this note is to ask the usual question asked by all who occupy a new building. Why must the Post Office, a monopoly organization, have the statutory right to insist on having all its telephone wires unconcealed?

Electrical wires, gas pipes, water mains and drains, all of which are generally connected with a public service, can be carefully concealed when the building is in course of erection. If they should subsequently need repair, a wall, a floor or ceiling may have to be uncovered—but that is unlikely to happen for some years. Meanwhile the appearance of the new building is unmarred.

The Post Office, however, seem to care nothing for appearance. They wait until the building is virtually complete, and then come along and tack their telephone wires along the tops of skirting boards.

About 18 months ago the Editor was having a house built, and he asked the Post Office the usual question: "Is there some type of cabling which can be incorporated in the structure so that later, when the telephone is connected, there will be no visible wires?" The answer was a polite but firm "No."

The Post Office Telephone Service, to give them their due, are almost always polite. Moreover, they still have a large backlog of applicants for telephones, and therefore they do not have to go out seeking this type of business. But surely the time has come to consider giving to their "customers" those little extra services,

like concealed wiring, which would make their work even more praiseworthy.



STRIKES

What About Third Party Losses?

A RECENT report by the London Chamber of Commerce on the working of the London Docks, puts very clearly the problem of third party losses that arise from strikes: "Twice within six months severe losses were inflicted on exporters who had paid for goods which they could not ship and for which, therefore, they could not obtain payment from their overseas buyers." Losses were also inflicted upon importers who had bought and paid for goods which they could not deliver to their customers and so again were out of their money. "Moreover," says the report, "exporters were forced to sit idly by and see business connections, which they had built up overseas at great expense, lost to foreign competitors, as confidence in the ability of this country to carry out its engagements was undermined."

"The users of the Port were not parties to the disputes in the dock industry, whether these were between employers and workpeople or between two rival unions, but undoubtedly the major losses resulting from these disputes fell upon them and it appears that they have no remedy at law against anyone."

"It is submitted that this is a quite intolerable state of affairs and that in any ordered society it should not be possible for individuals or groups of individuals to inflict loss and suffering on other groups of citizens without some redress being available."

Since the purpose of strikes is generally claimed to be the betterment of

workers' conditions, should not those who suffer third party losses be entitled to claim compensation from a central fund, such as the National Insurance Fund, which would then recoup itself from the "beneficiaries" of the strike by raising their weekly national insurance contribution? There may be no prospect of this idea being accepted in the near future, but merely to express it puts the problems of industrial discipline and responsibility into perspective.



PENSIONS

Should They Be Mobile?

A RECENT booklet "Pensions in the Building Industry" sets out details of the pensions schemes run by trustees on behalf of the Council of the National Federation of Building Trades Employers. A major advantage of these schemes is that a member transferring from the employment of one contributing employer to another does not lose accrued pension benefit.

A similar situation exists for university staffs. Throughout the Commonwealth, universities belong to the F.S.S.U., which makes it possible for staffs to transfer from one post to another without losing benefit.

The building industry is, of course, one in which there is traditionally a fair mobility of labour, due to the intermittent nature of contract work which causes one builder to require a temporarily larger group of employees while temporarily another may want to lay men off. Likewise, in the universities, there is a continued need for interchange of staff, to widen experience.

But what of other industries in which pensions benefits are often lost when an employee changes his job? Ironically, it is the Inland Revenue which has created this situation, for a properly regulated and restricted company pension scheme can qualify for full tax allowance on premiums paid, whereas if an employee chose to provide his own pension, independent of his employer, by taking out life insurance, he would be allowed tax relief only on two-fifths of his premiums. The Inland Revenue are thus reducing the mobility of labour by granting concessions which apply only to a rigid pension scheme, but not to ordinary life insurance.

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BRITAIN VERSUS GERMANY

Here are two stories about exports—one sad, the other hopeful. First, we present figures showing how Germany has been beating Britain in the export of eight major product groups to eight major markets. And second, we present case histories (in this and a subsequent article) showing how individual British firms are competing successfully against the Germans.

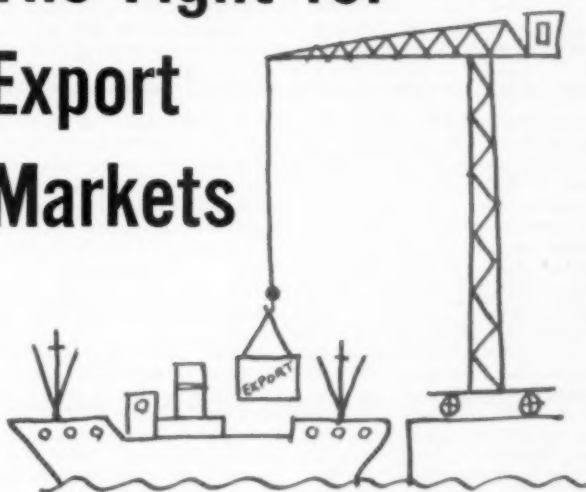
ON the following six pages we present the results of a detailed study of overseas trade competition between the United Kingdom and Western Germany. These results are presented in the form of tables depicting the course of trade in the first seven months of 1953, 1954 and 1955. They compare German and British exports of eight major commodity groups in eight major markets. The comparison is on the whole most unfavourable to Britain. In traditional Commonwealth markets, such as Australia and India, Britain still has a much larger share of the total market, but the Germans have recently made much more spectacular gains, and in the case of the Indian market for motor vehicles, metal working machinery and railway vehicles, the German share of the market is now greater than or almost as great as, the British.

In the United States market, both competitors have suffered some spectacular reverses, although the Germans have built up a market for their motor vehicles which now surpasses the reduced level of British sales.

In European markets, German sales were in most cases already ahead of British in 1953, but the Germans have since made more spectacular gains. A notable exception is the Italian market for electrical machinery, where British sales have increased faster than German, although the German share of the market is still greater. Also, British sales of cotton fabrics in Sweden have been maintained while German have fallen, and in the Netherlands, although German sales of office machinery have increased at a slightly better rate than British, our share of the market is still much greater.

In the Middle East, represented here by Turkey, we have lost a valuable market for cotton fabrics at a time when the Germans made spectacular increases in their sales of fabrics, but our sales of road motor vehicles have increased at a time when the German sales have decreased, and our share of

The Fight for Export Markets



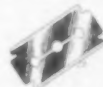
By BUSINESS Editorial Staff

the motor vehicle market is now greater.

In Venezuela, the only South American market studied in this survey, the Germans have made greater gains than the British in most markets, although Britain has maintained her ground in cotton fabrics at a time when the German share of the market has fallen.

There can be many excuses for the comparative ill-success of British exports against German competition; but there are few good reasons. If a firm has a good product, if they will go out and make a thorough study of the market, if they are really determined to sell, they can do so—in spite of the Germans. These are the broad conclusions which emerge from the export success stories, published below, of British companies selling widely different products. However, many

finer points of production and selling technique are mentioned here—points of which other companies wishing to sell abroad may wish to take note.



Case History 1. Gillette Industries Ltd. have a remarkable post-war sales record both at home and abroad. At home, the price of a *Blue Gillette* razor blade, less purchase tax, is no higher than it was before the war; abroad, Gillette exports have increased by as much as 300 per cent since 1948. German competition has not been allowed to interfere with this colossal expansion of trade.

The company are a world-wide organization; they sell razors, blades, shaving tackle of various kinds, sham-



German razor-blades are cheap. In poorer countries Gillette demonstration vans show natives how a better blade in a good razor is more effective and, in the long run, cheaper

poos and home perms in every country where shaving and shampooing are the thing to do, and in some where they are not—in 96 territories of the eastern hemisphere, which is the British company's province. There are subsidiary manufacturing and selling companies in several European and Commonwealth countries. There is one in Germany itself.

Germany has no one company approaching Gillette in size or scope: her razor and blade industry is made up of a number of small firms—probably more than 100—mostly concentrated in the town of Söllingen. A few firms produce blades of a quality near to, but a price above that of the *Blue Gillette* blade. But most are content to turn out a cascade of blades with the one advantage of extreme cheapness.

This German competition is therefore of a different sort from that presented by more modern and highly organized industries. But it is strong enough, particularly in the poorer countries; and no firm could keep a more jealous eye on it than Gillette. The company's methods for dealing with competition are both aggressive and thorough. Their controlling principles are simple enough.

1—*A good product.* There is no question of trying to beat the Germans at their own game, by lowering the quality and the price of exports. Besides the better-known Gillette brands, there are cheaper, "off-brand" blades—but even these are three to four times the price, and of far higher quality, than the usual German variety.

Nevertheless, a sharp eye is kept on Söllingen and its products. Every new

blade which appears in the shops is sent in by Gillette agents for inspection in London. Here some of them can be dismissed at first glance. Others, which show more promise, are tested scientifically. Tests not only produce a picture of the quality and consistency of the cutting edge, but can reveal something of the kind of machine being used for their manufacture.

Further, it is impossible for the Germans to keep their production methods secret, relying as they do on machinery provided by three or four firms, whose products are well-known here. Gillette also know that the Germans have very little in the way of testing equipment.

Gillette, on the other hand, use little machinery which they do not design and make themselves. An elaborate system of statistical quality control forecasts the probable quality of each batch, and work goes on continuously to find the ideal test of a razor blade without actually shaving with it.

The company, then, are keen to learn from the enemy, but find little or nothing to impress them in German methods. Rather they learn what the enemy is learning from them—imitations are not uncommon. When

Gillette introduced their slotted design perforation, many German firms reproduced the exact pattern, even the purely decorative parts, believing that there must be some hidden function for them. On quality, Gillette are sure of themselves.

2—*A suitable product.* However good the blade may be, it is no good trying to sell it to a Sikh—or sending it out to India at all, if the lacquer and wrapping will not survive monsoon conditions. Testing of wrappings has reached the point of refinement where "Calcutta" has been created on the Great West Road. A special chamber on the factory roof is kept at the normal heat and humidity of Calcutta at its worst. The chamber is noxious to enter, but the blades stand up to it for an adequately long period.

Market research, however, is the company's chief instrument for measuring the suitability of a product for a particular territory. They have their own market research department, started after the war. In countries where there are market research facilities equivalent to those at home, the company work through a local organization. Research is planned to find out the shaving habits of the people concerned, where they buy their instruments, what advertising media will be most suitable, and what line should be emphasized in the contemplated advertising campaign.

First comes "desk research"—analysis of general statistics. In Italy, for instance, in 1948, it was found that 60 per cent of the population lived in the North, enjoying 80 per cent of the national income—a clear pointer for the coming sales campaign.

Then, research in the field. This showed that daily shaving is not a general rule among Italians. Only one in ten shave every day: six in ten do so in the U.K. Three-quarters of the Italian population shave less than three times a week and one-third are shaved by a barber, at a cost of from 40 to 70 lire a time. One Gillette blade

Every new German razor blade which appears in the shops is sent in by Gillette agents for inspection in London

See this page

Exports to U.S.A.

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K.	1,966	1,650	1,533	-12%
	GER	3,800	2,200	2,472	-35%
Electrical Machinery, Apparatus & Appliances	U.K.	1,345	1,813	2,690	+100%
	GER	567	777	1,387	+145%
Road Motor Vehicles	U.K.	9,580	8,112	7,173	-25%
	GER	965	1,690	7,610	+690%
Office Machinery	U.K.	1,222	963	850	-30%
	GER	227	565	1,020	+350%
Metalworking Machinery	U.K.	1,084	681	449	-59%
	GER	2,860	1,736	1,060	-63%
Cotton Fabrics	U.K.	1,510	1,260	1,420	-6%
	GER	176	197	302	+70%
Railway Vehicles	U.K.	Nil	Nil	Nil	—
	GER	9	94	26	+177%
Scientific Instruments	U.K.	780	640	770	-1%
	GER	6,970	5,260	6,775	-3%

In the American market, the Germans have in the last three years built up bigger sales of road motor vehicles and office machinery than the British. But in chemicals, scientific instruments and metalworking machinery, both competitors have suffered declines

Exports to Venezuela

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K.	316	158	203	-35%
	GER	92	124	132	+43%
Electrical Machines, Apparatus & Appliances	U.K.	1,116	1,107	1,586	+42%
	GER	648	1,995	2,668	+312%
Road Motor Vehicles	U.K.	754	902	590	-22%
	GER	255	568	615	+141%
Office Machinery	U.K.	Nil	Nil	Nil	—
	GER	126	218	243	+90%
Metalworking Machinery	U.K.	Nil	Nil	Nil	—
	GER	84	103	107	+28%
Cotton Fabrics	U.K.	217	118	230	+6%
	GER	20	13	12	-41%
Railway Vehicles	U.K.	Nil	Nil	Nil	—
	GER	16	16	330	+2,096%
Scientific Instruments	U.K.	101	112	113	+12%
	GER	315	408	463	+47%

In the Venezuelan market for electrical machinery, Britain was ahead of Germany in 1953. Now the Germans are ahead. In other fields, the Germans have made spectacular gains, except in cotton fabrics, where they have slipped and the British have held their ground

costs 25 lire. When advertising media were investigated, it was found that 70 per cent of Italian men go to the cinema at least once a month (compared with 44 per cent in France) and that 68 per cent in the North read a newspaper, but only 56 per cent in the South.

3—*Suitable advertising.* Market research helps to decide both selling and advertising policy. The extent to which German blades are being sold will also have its effect on the line to be taken. In Italy, for instance, one advertising series emphasized the fact that it was possible and cheap to shave yourself, even when the barbers were closed. Among smooth-faced Chinamen, it is possible to get away with one shave a week and still be thought a gentleman, but only just; advertising, therefore, aims at getting people to shave twice a week and make a thorough job of it.

But in Belgium, for instance, where shaving is more regular, advertising is sometimes aimed more directly at the Germans. It stresses that a Gillette blade in the razor designed for it will

give more shaves and more lasting ones than a cheap blade in any old razor, and is therefore more economical in the long run.

The company make a point of leaving, wherever possible, all advertising details to the country's own advertising agencies. They believe strongly that it is folly for an advertisement to be designed in London, where the customs and idioms of the people concerned are not part of the air that advertisers breathe. Even an apparently simple and successful slogan like "Good Mornings Begin With Gillette" would be quite untranslatable in most languages, or at least would look odd to the natives.

Overseas advertisement material, however, is not all tailor-made for the country it is aimed at. There are obvious economies to be made by providing material which can, with a little adaptation, be used anywhere. The same one-minute colour film, for instance, is made for showing over a very wide area in different versions, each with a different racial type as the protagonist.

As with advertising, so with point-of-

sale display: a little informal market research can prevent an absurd misdirection of energy. There is, for instance, no sense in sending cardboard display cards and centre-pieces to Egypt when the Arab shops have no windows and no room inside. Except where there are western-type shops, cardboard is eschewed, and the emphasis is on permanence—tin signs, for example, stuck on wayside African trees.

4—*United action.* A cameo of this Anglo-German battle of the beard is provided by the colonial African market. Sales representatives report heavy sales of cheap German blades in, say, Nigeria. African shop-keepers like to give something away to shoppers as a sweetener, and German blades are excellent for the purpose. Some Germans are copying the layout and colour of Gillette wrappings, hoping to pass them off as the real thing to illiterate natives. Africans are observed shaving with a blade held between thumb and first finger, or even with jagged pieces of glass. Lather is not a customary prelude to the

Exports to Sweden

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K.	679	696	698	+3%
	GER	1,722	2,735	2,680	+57%
Electrical Machinery, Apparatus & Appliances	U.K.	2,304	2,584	2,379	+3%
	GER	3,890	5,250	6,750	+74%
Road Motor Vehicles	U.K.	5,814	10,350	5,620	-3%
	GER	5,575	6,540	15,025	+177%
Office Machinery	U.K.	128	168	215	+68%
	GER	888	921	1,298	+47%
Metalworking Machinery	U.K.	368	321	458	+24%
	GER	2,750	1,540	2,142	-22%
Cotton Fabrics	U.K.	679	696	698	+3%
	GER	2,400	1,530	1,792	-11%
Railway Vehicles	U.K.	Nil	Nil	Nil	—
	GER	870	1,161	877	+1%
Scientific Instruments	U.K.	770	954	915	+20%
	GER	1,665	2,295	2,720	+63%

In almost every section of the Swedish market, the Germans were ahead of the British in 1953, and they have made much more spectacular gains since then, except in metalworking machinery and cotton fabrics. Here the British have gained and the Germans have slipped

Exports to the Netherlands

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K.	1,560	1,513	1,124	-28%
	GER	3,200	3,750	4,440	+38%
Electrical Machines, Apparatus & Appliances	U.K.	2,837	3,947	3,777	+33%
	GER	4,270	7,270	9,505	+122%
Road Motor Vehicles	U.K.	2,918	4,172	4,289	+96%
	GER	4,160	7,510	10,300	+148%
Office Machinery	U.K.	513	584	1,047	+96%
	GER	345	650	790	+106%
Metalworking Machinery	U.K.	291	311	362	+24%
	GER	1,575	1,989	2,180	+38%
Cotton Fabrics	U.K.	560	216	112	-80%
	GER	1,028	847	719	-30%
Railway Vehicles	U.K.	435	622	536	+23%
	GER	363	544	1,030	+192%
Scientific Instruments	U.K.	734	735	780	+6%
	GER	1,662	2,470	2,758	+65%

In 1953, the Germans had a much greater share of the Dutch market for chemicals, electrical machinery, motor vehicles, metalworking machinery and scientific instruments. Their gains in these fields have since been much greater than the British but in office machinery Britain still holds the lead

African's shave.

A counter attack is planned in London, after consultation with the selling and advertising agents in the territory. The advertising line is specially devised for its audience. Sex-appeal is ruled out—the African gets his wife with cattle not with cheek—and emphasis is placed on the personal success which may be attained through smartness—which comes from shaving regularly. Advertisements are also designed to bring out the quality and long life of Gillette blades.

The travelling van illustrated on page 74 is used to give practical demonstrations to natives who do not know how to shave properly, and the company also makes use of instructional films.

Of great importance is the sale of low-priced razor sets with Gillette blades in them. Even if the native cannot afford to go on buying *Blue Gillette* blades after indulging in a razor, a standard is set which he may try to return to when greater prosperity sets in. Store is also set on the fact that the native often likes to copy the white man; and among whites the

German blades are not popular.

The whole world-wide campaign is capped by constant visiting of every country by the highest executives from London, and by a stream of enterprising and not too orthodox representatives' probing markets, bazaars and shops in their search for the unharvested beard.



Case History 2. Selling books is a very different proposition from selling razor-blades, especially in the field where German competition is strongest—school and university textbooks on scientific subjects. Each book is an individual product to be sold on its merits in a limited and highly critical market. Yet even here Longmans, Green & Co. are carrying out some high-level market research of their own.

After the war there was a big demand for English books from European countries such as Holland and Norway. The Germans took a long time to start publishing again, scientific conferences were held in English and

there was a natural reluctance anyway to buy German. Even Dutch and Scandinavian publishers often print books in English for domestic consumption as well as for the much larger market of the English-speaking world.

One way in which the company have taken advantage of the situation and are helping to create a demand for their own more advanced works, is by developing their sales of school textbooks for the teaching of English. Their chief European representative constantly visits schools and educational authorities, and is helping to create a generation of English-speaking students.

It may be some time before these become a generation of English-speaking professors, and in determining what the European student reads, the professor is an almighty and sometimes everlasting influence.

The company therefore make a practice of sending senior executives to tour European university towns and talk to the dons about the books that have been published and those they would like to see published. Most new scientific books are commissioned by

Exports to Italy

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K. GER	1,182 1,958	1,116 2,821	964 3,100	-18% +58%
Electrical Machines, Apparatus & Appliances	U.K. GER	1,262 4,250	1,704 3,890	1,602 4,325	+27% +2%
Road Motor Vehicles	U.K. GER	177 557	110 840	169 1,065	-4% +91%
Office Machinery	U.K. GER	Nil 302	Nil 331	Nil 368	— +21%
Metalworking Machinery	U.K. GER	556 3,600	785 3,201	573 3,250	+3% -10%
Cotton Fabrics	U.K. GER	294 49	225 180	173 200	-42% +304%
Railway Vehicles	U.K. GER	Nil 108	Nil 182	Nil 117	— -8%
Scientific Instruments	U.K. GER	641 1,645	736 2,042	754 2,360	+18% +43%

In the Italian market, the Germans were well ahead of the British in 1953, in sales of chemicals, motor vehicles and scientific instruments. Since then they have made greater gains. But in electrical machinery and metalworking machinery, where Britain had a smaller share of the market, we are gaining ground.

Exports to Turkey

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K. GER	397 230	224 212	280 314	-30% +37%
Electrical Machines, Apparatus & Appliances	U.K. GER	845 1,578	355 1,625	650 2,758	-23% +73%
Road Motor Vehicles	U.K. GER	748 2,160	446 832	1,472 1,150	+97% -47%
Office Machinery	U.K. GER	Nil 33	Nil 82	Nil 29	— -10%
Metalworking Machinery	U.K. GER	Nil 206	Nil 192	Nil 99	— -93%
Cotton Fabrics	U.K. GER	260 925	73 1,147	1 3,275	— +254%
Railway Vehicles	U.K. GER	Nil 719	Nil 736	Nil 50	— -93%
Scientific Instruments	U.K. GER	Nil 271	Nil 220	Nil 216	— -20%

Of the eight territorial markets examined in this survey, Turkey is the only one in which the British motor vehicle industry has recently made gains at the expense of the Germans. But Britain has almost lost her market in cotton fabrics, at a time when the Germans have more than tripled theirs. In chemicals and electrical machinery, the Germans have gained ground, while British sales have fallen.

the publishers, not sent in hopefully like first novels. It is up to the publishers to find out what is wanted.

A Dutch professor may suggest that although there is a German book on, say, invertebrate zoology, he could do with a more up-to-date one, whether in English or German. Longmans will then find out whether there is general support for the idea among other invertebrate zoologists, dig out the most suitable British authority and get him to write the new book. They make sure that he takes a good look at the older German work.

Longmans have always been able to sell their books at prices well below their German and American competitors, but they were rather disappointed to discover at recent Frankfurt book fairs that this was of comparatively little importance. The general feeling among foreign booksellers and publishers alike was that students could not afford to buy books anyway, so what did the price matter? The books had to be bought by college libraries and other institutions which wanted to

keep up to date, and they could afford any price within reason.

One volume, in fact, of a Longmans chemical dictionary, no lightweight, was selling at £7, while a massive German equivalent fetched about £22 10s. Of this kind of book the German publishers probably printed only about 1000 copies aimed at institutions, and reserved for themselves a very much larger profit margin on each copy than the normal British percentage.

But there are a great many less expensive books, particularly those writ-

ten by scientists engaged on new research work, which dons themselves, research graduates and at least the most advanced students do buy, and here Longmans are doing well. As with razor-blades, so with books. A good product is the first essential; and the Longmans representatives know that the continent is looking to Britain as the home of the world's most promising research projects.

What is more, the continentals are becoming more adventurous in their reading, beginning to prefer what used to be considered a slapdash British

- Senior executives of Longmans tour the
- European university towns and talk to
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- ising research projects

See opposite page

Exports to India

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K. GER	1,785 872	2,875 1,495	2,476 1,205	+39% +38%
Electrical Machines, Apparatus & Appliances	U.K. GER	11,783 1,000	9,201 1,411	8,307 2,322	-29% +132%
Road Motor Vehicles	U.K. GER	1,344 34	1,947 129	1,716 2,050	+28% +510%
Office Machinery	U.K. GER	207 38	147 71	302 52	+46% +37%
Metalworking Machinery	U.K. GER	1,197 588	1,092 920	1,315 1,525	+10% +159%
Cotton Fabrics	U.K. GER	339 4	286 12	276 24	-18% +500%
Railway Vehicles	U.K. GER	2,671 1,795	2,286 476	2,289 2,222	-14% +24%
Scientific Instruments	U.K. GER	1,225 400	1,279 520	1,670 1,095	+36% +174%

The traditional British market in India is still very much larger than the German in most fields, but in the case of motor vehicles, metalworking machinery and railway vehicles, the Germans are now ahead of or almost up to the British. In office machinery and scientific instruments Britain is still making greater gains

Exports to Australia

Value (£ thou.) for 7 Months Ended July 31

		1953	1954	1955	Change from 1953-1955
Chemical Elements and Compounds	U.K. GER	1,231 394	1,992 880	2,020 1,052	+64% +167%
Electrical Machines, Apparatus & Appliances	U.K. GER	10,845 407	10,671 1,020	11,441 904	+5% +122%
Road Motor Vehicles	U.K. GER	8,355 30	15,818 623	18,115 1,880	+116% +6,184%
Office Machinery	U.K. GER	956 81	1,268 121	1,365 228	+43% +182%
Metalworking Machinery	U.K. GER	2,363 172	2,330 304	2,136 428	-10% +150%
Cotton Fabrics	U.K. GER	6,003 304	10,223 760	7,710 846	+28% +178%
Railway Vehicles	U.K. GER	3,498 290	3,588 364	1,708 49	-51% -84%
Scientific Instruments	U.K. GER	1,134 296	1,976 936	1,997 1,275	+76% +330%

The German share of the Australian market is, of course, much smaller than the British, but during the last few years the Germans have made spectacular gains. Their trade in chemicals and scientific instruments is now not far below the British

approach, to the laborious display of learning which can be relied upon to leave nothing out.

On the strictly commercial side, the Germans, as usual, provide a first-rate service. They give discounts of as much as 40 per cent, compared with the British 30 per cent, and they pay carriage, which we do not. As for delivery dates, all that need be said is that Longmans are annoyed that it may take a week to ship a book across to Europe, while the Germans can speed theirs across country in a couple of days.

One definite advantage the Germans have created for themselves in their eagerness to regain export markets: their system of supplying books, like

newspapers, on a sale-or-return basis. The bookseller pays nothing until he sells the books. Longmans were impressed with this arrangement and have introduced a modified form of it themselves. Their system is known as "See-safe"; booksellers have to pay for the books they order, but the publishers guarantee that they will credit the bookseller concerned and take back the book if it is not sold. The scheme has been extremely successful in increasing the orders booksellers are prepared to make, and very few of the books sent out in this way have in fact been returned.

Another fairly obvious weapon, but one little used by Germany, is translation. Any book thought suitable for

translation into a European language is sent to a publishing house in the country concerned, for a foreign-language edition to be prepared—unless the author first produces a suitable translator. "Gone with the Wind" and various theological works are, for some reason, running neck-and-neck in the Dutch translation stakes.

One most important part of the company's market research is a study of the European bookseller. On the continent bookselling is a skilled trade, with a long apprenticeship and exams to be passed at the end; so Longmans representatives have to put up with a good deal of pontifical theorising about the Place of the Novel when they are on circuit. But, on the whole, they are glad of the system, for booksellers tend to be more knowledgeable than in this country, and it is heartening for a representative who believes that a book is good, to be able to make someone understand why.

In practice, the company's chief European representative has built herself such a reputation for honesty and good judgment, that her customers will usually take anything she recommends.

The influence of past German training is being countered by offering employment in Britain to European students of bookselling

See opposite page

But in the past many of these book-sellers received their training in Germany, and have a natural inclination towards the trade they know. Together with other British book firms, Longmans are beginning to counteract this influence by offering employment to European students of book-selling, so that they may come to Britain, work in publishing offices, book shops and printing works, and die themselves to the wool in a sea of British literature.



Case History 3. Finally, a new line of thought for those who talk mournfully of those well-known British handicaps: futuristic delivery dates, high labour costs, the indecent thriftfulness of German salesmen, and the rest.

R. H. Windsor Ltd., a Chessington firm with 300 employees making injection-moulding, extrusion machinery and all kinds of ancillary equipment for the plastics industry, are not only consistently selling a higher percentage of their products abroad than at home in the face of a score of active German competitors; they are selling plenty of machinery to the Germans themselves.

Their delivery dates are sometimes behind those of their competitors; their machines are more expensive than most of those made in Germany; their managing director trots the globe himself, unaccompanied by teams of high-pressure salesmen; yet they are making even the Germans buy British. German cars may be enjoying remarkable

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- German cars may be enjoying remarkable success in many of the world's
- markets, but some of them have plastic
- steering-wheels moulded on machinery
- supplied by Windsor's
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See this page

success in many of the world's markets, but some of them have plastic steering-wheels moulded on machinery supplied by Windsor's. How is it done?

Quality is again the answer. Because of the peculiarly stubborn behaviour of plastic granules when they come for moulding, their refusal to melt or to conduct heat except under severe duress, moulding machines are of formidable size and complexity. The company's "baby", which will produce a single ounce of, say, thimbles

system, before it will allow itself to be moulded.

No serious manufacturer is going to install a monster machine of this kind unless it is likely to be efficient and reliable for some years to come. First-class development engineers, well versed in both the theory and practice of their art, and ahead of most of their German opposite numbers in technique and imagination—these, working with the factory's highly-paid craftsmen, have established for the company just this reputation for reliability.

Among German customers, the company's machines are known for long-lasting efficient and hard service, without need for constant repairs. For machines with a reputation of this kind, customers are prepared to wait and to pay. Indeed, plastic-moulding is such a rapidly expanding industry that an immediate delivery for machinery could well arouse customers' suspicions.

The company's name is kept on show in advertisements appearing in the world's plastics periodicals; but plastics manufacturers are a close enough fraternity for accumulated experience and discussion within the trade to count for more. Selling and advertising details are left to the agents on the spot. A Windsor stand is frequently a feature of German trade exhibitions.

The factory's production programme is decided month by month according to the orders on the books. It is not a mass-production factory, and many different arrangements are possible for turning out so many of each of the 14 different types of machine every month. But a close eye is kept on the long-term position in the order book so that all agents may have definite dates by which any type of machine can be supplied.

INSIDE GERMANY—The Windsor stand at this year's Dusseldorf trade fair. Quality is what counts in selling these vast moulding machines: they are being sold widely in Germany itself as well as in other foreign markets where German competition is strong

Two further case histories will appear in the February issue of BUSINESS. The Editor would be grateful for news about other British companies who are competing successfully against the Germans, and who would agree to providing information for stories

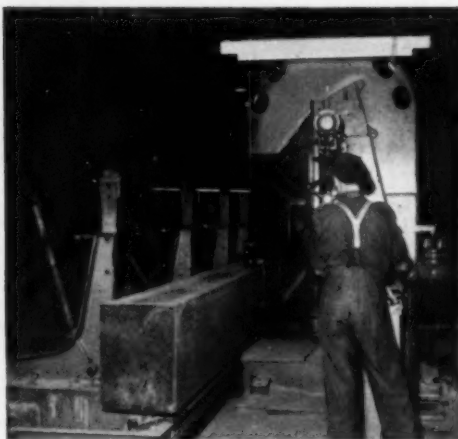
at each operation, would fill two properly dug graves. Their largest moulder, which will turn out a television cabinet or baby's bath weighing 10 lb., would make a Green Line bus feel stunted. The top of a bread bin may need 300 tons pressure on either side, as well as an elaborate heating





Logs arrive by both road and rail—the firm has its own rail siding. Tripod cranes are used to unload and stack the logs and, later, to position them for saw-milling. Logs vary in length from 12 to 30 ft.

2 To cut the logs into planks of suitable grades and sizes, the firm use a variable gear conveyer system which automatically feeds the logs to the band-saw.

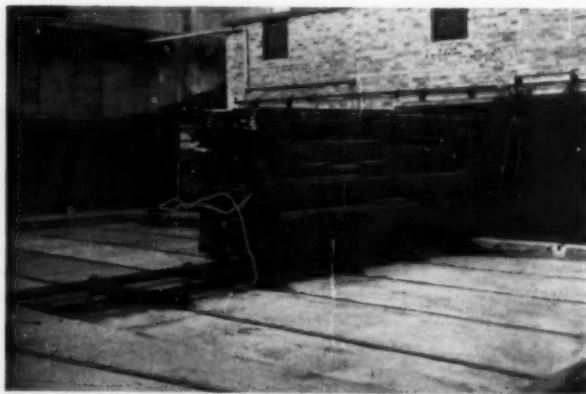


'Business' Picture Story

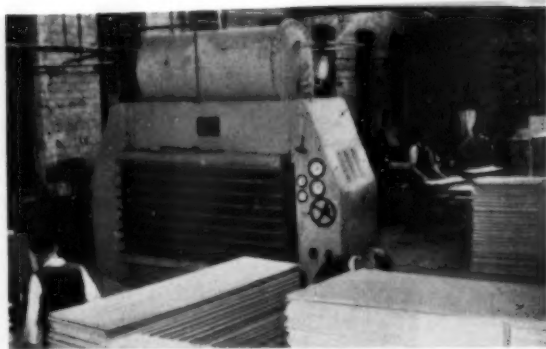
Better Handling Means Greater Output

For this Enterprising Furniture Manufacturer

Like Morris of Glasgow (whose successful debut in the "popular" market was described last month), A. H. McIntosh Ltd., of Kirkcaldy, Fifeshire, have recently switched from the manufacture of specialized furniture to products for the home. This entailed large-scale re-organization, particularly where methods of handling were concerned, and the pictures shown here illustrate how the firm have succeeded in solving a problem which, due to the large size of the components in use, has always presented difficulties to the furniture industry.



3 Planks are conveyed to the drying kilns by bogies mounted on double tiers, one transverse to feed the kilns and one longitudinal to feed the transverse. This system is preferred to the use of a flow-line as considerable air-drying takes place while the loaded bogies are awaiting their turn to enter the kilns, thus cutting down on the amount of kilning time required.



- 4 The planks are then passed on for veneering. This is done by a large press, which veneers eight planks simultaneously in time-cycles of six to eight minutes. For this type of press work, a conveyer system is considered unsuitable, and small hand-trolleys provide the most economic alternative. At the same time they provide a useful form of storage.

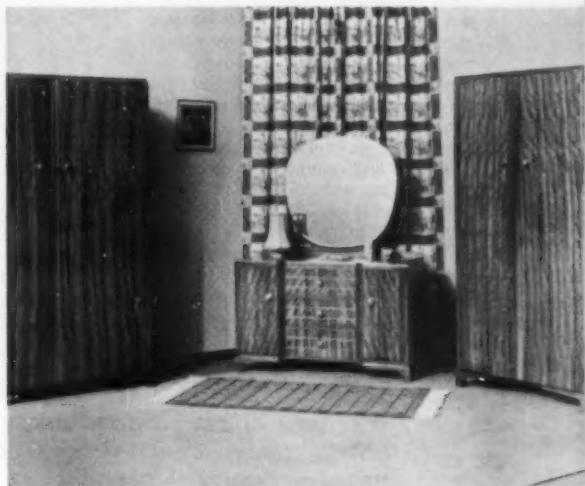


- 6 After completion, the products go into storage. Transportation to and from the storage section is carried out by a special lift. This serves four floors, and has doors on two sides to enable loads to be taken on and off at the same time.

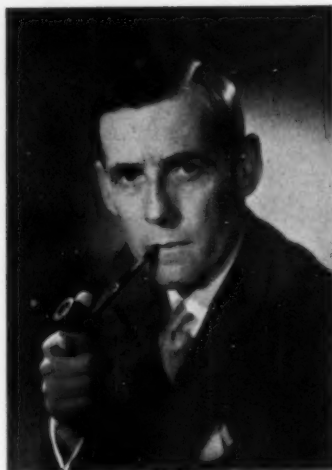
- 7 A typical product of the McIntosh factory is this attractive bedroom suite. Improvements in mechanical handling have helped the firm to increase their output by nearly 40 per cent without needing either extra staff or floor space.



- 5 After assembly of the various components, the furniture is conveyed to the spraying and polishing department. Small articles are moved by hand-trolley, but for larger pieces there is a more elaborate system. This consists of a wire cable running between guide rails on which are mounted the furniture trolleys; the cable has a reciprocating action, and by a special trip linkage the trolleys are brought forward on the guide rails and processed through the polishing department. The speed can be adjusted to suit the altering needs of either manpower or polishing finishes.



The career of Alick S. Dick, 39-year-old managing director of Standard Motor Company, provides some important leads to the nature of administrative flair. Because he found himself in a responsible executive post in a fastly-expanding shadow factory just before the war, he had to develop rapidly for himself some of the key habits of working which are invaluable in achieving business success. And his private life has been subjected to similar logical development.



ALICK S. DICK

An acute sense of the value of time

ADMINISTRATIVE FLAIR

Here Are Some Clues to it

IT is unusual for a man still in his thirties to become chief executive of a large manufacturing firm—unless he inherits the responsibility from his father. Alick Sydney Dick was only 37 when, in 1954, he was appointed managing director of Standard Motor Company. And he is the son of a Chichester doctor. What were the circumstances and the personal qualities which took him so quickly to the top of a company with 11,000 employees and a world-wide reputation for its motor vehicles?

His grandfather, Allan Dick, was a metallurgist at the Royal School of Mines and, in fact, was the first to produce aluminium in this country. An exhibition by Michael Faraday at the Royal Institution on March 27,

1885, showed a piece of "Aluminium from Cryolite by Sodium in my Laboratory by A. Dick."

Sent away to preparatory school at Clifton at the age of six, young Alick later went on to Dean Close school, Cheltenham. Then for family reasons, he returned to Chichester and took his General Certificate at Chichester High School. After leaving school he took a six months' general engineering course with the British School of Motoring,

and then asked his uncle to recommend him for an apprenticeship in a motor company in Coventry. Hence he came to join the Standard Motor Company.

Young Mr. Dick had not been two years on his apprenticeship when a re-organization of the company resulted in his being switched from the works to a clerical job in the material control department. Meanwhile, he had been continuing his engineering studies in

Whereas others concentrated on getting things designed, he concentrated on getting things done



See opposite page

When a new executive is appointed, a memorandum describing his duties, and to whom he is responsible, is circulated to all executives

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the evening at Coventry Technical College.

It was in the material control department that he showed his first signs of administrative flair. For he took a great interest in the buying of components, and learnt so fast that when the first Standard shadow factory was built in 1936, under the Government's re-armament programme, he was put on to the job of buying for this factory. This sounds like a very big job for a boy of 19, but the factory was initially making only 30 or 40 components for aero engines, and Mr. Dick did his buying in the same department in which he had previously worked, under the control of the head buyer.

Moreover, his job was not considered to have big prospects, for the first shadow factories were ridiculed by cartoonists. War seemed a long way off.

However, Hitler changed all that. When the defence effort had to be

greatly speeded up a few years later, work at the shadow factory multiplied rapidly, and Mr. Dick's work grew with it. In spite of his young age, he had such clear ideas on how to organize the flow of output that he was appointed production control engineer.

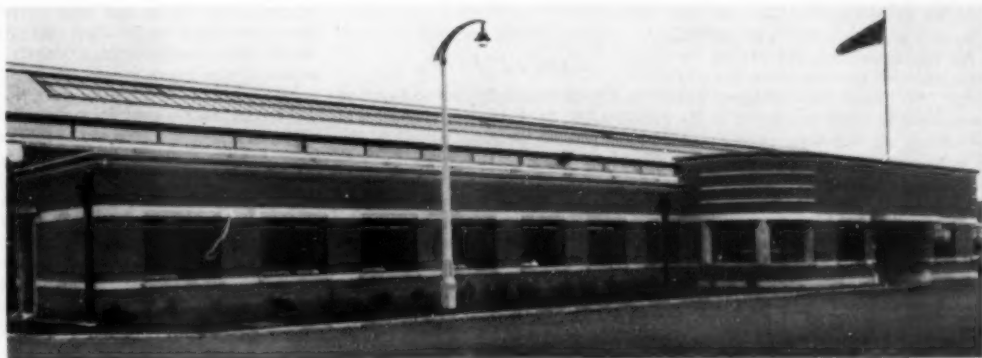
Rapid Promotion

Such is the irony of fate that he attributes some of his success during this period to the fact that he did not finish his engineering studies, and did not become highly specialized. Because he did not become immersed in technical detail he was able to look more clearly at the practical problems of organizing an efficient and smooth flow of output. Whereas others concentrated on getting things designed, he concentrated on getting things done. Both types are very necessary, but at the beginning of a war those

who concentrate on getting things done inevitably receive very rapid promotion. Designs have to be temporarily frozen, and all efforts concentrated on increasing output.

Most of the men who were under Mr. Dick's control at this time were much older than he was. Throughout his career he has had to face this problem of controlling older men. And the fact that he mastered it early has probably helped him to go so far, for it has never been possible for him to ride rough-shod over his subordinates and just tell them to "do this" or "do that." He has always had to explain what he wants done, and why—justifying his decision as the right one. He has had to earn respect for good judgment. Older men do not take kindly to wrong decisions made by younger superiors, and the need for justifying his decisions has no doubt helped to develop Mr. Dick's powers of reasoning and judgment.

Another lesson which Mr. Dick had to learn early, is that no matter how busy he was, he just had to find time at regular intervals to sit back and look at his work as a whole, and decide what he should delegate and not continue to do in detail. When the shadow factory expanded so rapidly at the beginning of the war, it would



At 19 Mr. Dick did the buying for components made in this shadow factory. Re-armament soon gave him opportunities to develop his administrative flare



The "phase three" Vanguard

have been easy for a relatively inexperienced young man to become so immersed in a growing volume of detailed work, that the job would get beyond him. But he had to train himself to stop and think why particular problems arose, why they kept coming to his attention and how he could change the system to solve them.

Today, when he sits at his desk at the Banner Lane works, Coventry, he finds himself automatically thinking: "I've seen rather too much of that type of problem lately. A solution must be found, and the organization changed so that it ceases to be a problem."

Every senior executive has to develop an acute sense of the value of time, so that he can watch all aspects of his responsibilities, not paying too much attention to some and neglecting others. Mr. Dick had to learn this lesson early in order to survive in the hurly-burly of war-time production. He subscribes to the view of General Eisenhower that "the best generals are the lazy ones." An executive who thinks of an idea and gets it under way, has a natural tendency to keep on tinkering with it long after it has become a routine. But his real capacity as a senior executive is proved when

he shows that he can throw it overboard—pass it on to somebody else—once it is running properly.

A willingness to pass on work and delegate responsibility to others implies a willingness to show confidence in his subordinates. Mr. Dick provides one clue to what this confidence involves when he says that he naturally expects his subordinates to delegate responsibility also. And when he phones through to a departmental head and asks a question, he does not expect the departmental head to give an immediate answer. All he expects is that an answer will be provided fairly quickly from someone who does know.

Crucial Period

Such was his administrative flair that in 1944 Mr. Dick was put in control of production of *Mosquito* aircraft at the Standard factory. But when the war was over there came a crucial period in his career. He could have chosen to continue as a departmental executive, possibly rising later to a position on the board. But because he was still very young—not yet 30—Sir John Black, who was then managing direc-

tor, asked him whether he would like to be his personal assistant.

The post of personal assistant can mean almost anything or nothing. It can range all the way from being a message-carrier between departmental heads and the managing director, and at the other extreme, being a responsible executive who is given particular briefs by the managing director and who acts on his behalf. Adventurous by nature, Mr. Dick decided not to continue as a departmental executive, but to accept the more risky position of personal assistant. He realized that if he did not get on well with Sir John Black, or if he clashed badly with departmental heads, his future with Standard might be finished, and he would find himself seeking a post elsewhere.

Nevertheless, he chose to play for top stakes, and to step down from his senior departmental position to that of mere message-carrier for the managing director. At least, that was the nature of his new job when he first took it. But he soon realized how to turn it into a position of responsibility. For example, whenever a departmental head passed him a problem for the managing director to decide, he would study the

Mr. Dick regards the happiness of his family as . . . the object of all his work. He rarely takes work home



See opposite page



When made personal assistant to the managing director, he started as a mere message-carrier, but "soon realized how to turn it into a position of responsibility"

See opposite page

problem himself first. Then, when he took it to the managing director, he was in a position to discuss it and make a personal recommendation.

Providing his recommendation was sound, the managing director would sometimes say to him: "All right, do it that way. You get on with it." And so he was given highly responsible assignments. It was not long—1949—before he was appointed assistant managing director, and later, in June, 1953, deputy managing director. He became managing director when Sir John Black retired in 1954.

Although he came up to the top via the role of personal assistant, Mr. Dick does not today have a personal assistant under him. He realizes that he has a different personality from Sir John Black, and that many things which were done a certain way, and done rightly in Sir John's time, must be done differently now. The top-level organization of a firm must, he believes, to a considerable extent reflect the personality of the chief executive.

Mr. Dick prefers departmental heads to do their work individually, rather than in committees, although he appreciates that the work of different departments must be co-ordinated by committees. But he does not expect his executives to be attending an average of more than one committee meeting a week. He has a horror of those organizations in which, if one phones for Mr. X, one finds that he is just preparing to go into a committee, is in a committee, or is just coming out of one.

There is a precise organization chart at Standard Motor Company, showing the lines of responsibility of each executive. And when a new executive is appointed, a memorandum describing his duties, and to whom he is responsible, is circulated to all executives. This is as one would expect in a firm controlled by a young chief executive with a special flair for organization.

Whereas many successful business careers have been developed by neglecting home life, this is certainly not true in the case of Mr. Dick. He regards the happiness of his family as "the thing in life that really matters"—the object of all his work. He rarely takes work home with him, and on the

whole does not work very late at the office, although circumstances dictate irregular hours on quite numerous occasions.

When Mr. and Mrs. Dick went on a recent world tour, covering 30,000 miles, they arranged to depart the day after their three boys went back to school, and they returned home two days after the boys returned from school for the next vacation. Mr. Dick tries to arrange his overseas trips in term time, although there are occasions when this is impossible. He may, for example, go away on a trip which has been well timed, only to return and find that he must depart on another.

Social Activities

Mr. Dick is not a keen "club man," but he and his wife become involved in congenial social activities on an average once a week—activities in which it is difficult to draw the line between business and pleasure, because in a motor manufacturing firm with worldwide trading interests, they are frequently entertaining or being entertained by overseas visitors.

A keen tennis player, Mr. Dick also has a bungalow in South Wales, where he and the family engage in boating and fishing. His boat is just a small dinghy, not a large yacht, because he believes that he should not let his

recreation become "another job," entailing responsibilities for the engagement of crew, purchasing of stores, etc. Likewise with his small 30-acre farm, he enjoys farming but does not intend to take it too laboriously.

Although he has been able to lead a happy domestic life in addition to his successful business career, Mr. Dick does not believe that all his problems can be left in the office. With regard to major problems, he believes that "one must necessarily think of them through the clock, and one sees the answers in the most odd places and at odd times." For example, on his recent world tour, he returned from Australia by sea, and the voyage gave him time for reflection, to sort out the answers to a couple of important problems.

It is not uncommon for the executive who achieves mastery of a great business organization to neglect himself, and to slip into ruts of habit which lead on to ill-health, indecision and decline. There seems to be little chance of this happening to Mr. Dick. He has certainly mastered his position as chief executive of Standard Motors, but even more impressive is his mastery of himself—the training of his mind and the logical development of his way of life. It would be surprising if in the years to come he did not achieve even greater success as a British industrial leader.



The TR2 has won 285 contests in the last 12 months

British Overseas Airways Corporation believe that every member of their staff who comes into contact with passengers is, in effect, a public relations officer. This article describes how, although dealing with hundreds of people every day, they train their staff to safeguard their reputation for personal service.



They Keep the Accent on PERSONAL Service

ALMOST every business has staff who are in direct personal contact with the public in one way or another. Whether they are telephone operators, receptionists, waitresses, bus conductors, sales representatives or shop assistants, the impression these employees make on the outside public has an important influence on their firm's reputation.

In highly-competitive fields where the end product or service of rival companies may be very similar, the skill with which staff deal with the consuming public may well prove a deciding factor in a firm's success or failure.

This is certainly true to a large extent in civil aviation. With most of the world's major airlines operating fleets of nearly identical aircraft over common routes and charging fares on an internationally-agreed scale, the "personal approach" used by staff in

the handling of passengers becomes a vital factor in attracting custom.

For this reason, British Overseas Airways Corporation give special training to all their staff who come into contact with the public in the normal course of duty. Besides the flying staff and cabin crews, these include all who are concerned with looking after

passengers before and after journeys—from station managers down to ticket clerks and porters—who come under the group heading of traffic personnel.

Although few companies have to deal with the public on such a large scale, the principles and techniques of handling which B.O.A.C. have devised and adopted cover a multitude of situations, and they could have wide

application in industry and commerce.

The traffic staff are normally the first to greet the Corporation's passengers and the last to bid them farewell—psychologically a most important factor in any form of public relations. Indeed, it is fair to say that the opinion the public retains of the Corporation's service depends largely on the impression these employees create.

To ensure that uniformity of approach to the passengers is obtained, B.O.A.C. have laid down a well-defined technique for staff to follow. All personnel are given instructions in the principles involved, during their basic training.

These principles come under seven headings:

- 1—Keeping passengers informed
- 2—Giving exact information
- 3—Helpfulness
- 4—Inspiration of confidence
- 5—Politeness
- 6—Cheerfulness
- 7—Appearance

Information

In dealing with the first two principles, staff are encouraged to become

By PAUL BENNETT

"passenger conscious"; to imagine themselves in the passengers' position and allow their actions and behaviour to be guided by the probable effect it will have on passengers. The point of this is, of course, that if they did they would never leave passengers for a moment in any doubt as to what is going to happen.

One golden rule is that in no circumstances should staff tell passengers anything but the truth. Experience has proved that even white lies or equivocations can be dangerous. Passengers have an uncanny knack of finding out the true facts if information is hidden from them. It is folly to under-estimate a passenger's intelligence.

Airline staff can expect to be asked questions on all manner of subjects. It would be too much to expect them to know all the answers, but B.O.A.C. cover even this with a rigid instruction. Staff should never say in reply to a passenger's question, "I don't know." The answer must always be "I will find out." Then they must find out.

It is also of the greatest importance that all information given by staff should be accurate. There should be no guessing at answers, for the slightest inaccuracy may cause untold inconvenience to a passenger or to other members of the Corporation staff on the other side of the world. The B.O.A.C. instruction is explicit: The passenger must be told exactly what he can or cannot do, and he should be warned of possible difficulties if he looks like plunging into them.

Helpfulness

The reputation of an airline depends very greatly on the standard of its service to passengers. B.O.A.C. impress upon their staff that the Corporation's reputation in this respect has been painstakingly built up over the years by giving individual and personal service to passengers. As the number of passengers increases, this becomes proportionately more difficult, but the technique devised by B.O.A.C. is

calculated to uphold their jealously-guarded reputation.

A fundamental is that passengers, even if they are being handled in numbers and are in fact being shepherded from one place to another, must never be conscious of being herded. This can be accomplished, staff are instructed, with an informal but nonetheless smart approach to individual passengers as they pass one by one from one process to the next.

During a rush it may be necessary to be rather brief and a little firm to ensure that one passenger does not get more than his share of attention to the detriment of others. But in a case like this a little tact goes a long way. Above all, staff are cautioned against allowing themselves to be flustered. Experience has taught that this will react on passengers, and infectiousness of atmosphere is something which has to be watched carefully. Similarly, one dissatisfied passenger can, unless properly handled, upset a whole aircraft full of passengers. The rule here is, if one passenger is disgruntled, staff must make every effort to remove the cause of complaint as soon as possible.

The Corporation are very conscious of the effect of passengers talking

during their journey and after it. A dissatisfied client can undo the good work that has been done by good service to a dozen or more. Clients are likely to take good service for granted, even if they are appreciative, but the client with a grouse will be loud in his depreciation of the airline.

Confidence

It is of paramount importance that airline staff, whether on the ground or in the air, should inspire the passengers with confidence. For this reason, staff are forbidden to talk about bad weather and bumpy conditions unless it is necessary, and they must not dramatize the journey in any way. The take-off and landing, being more dramatic than normal flight, are calculated to affect the passenger more than the rest of his journey. At these times the mere sight of an officer in uniform who is obviously aware of everything that is going on and is taking it as a matter of routine will reassure a passenger. On the other hand, staff must guard against appearing preoccupied with other matters, so giving an impression that the service is slipshod.

There is a strict rule that in no cir-



To help create the impression that their welfare is a matter of personal interest to the airline staff, B.O.A.C. captains usually spend a few minutes each trip mingling with the passengers.

BELOW: Cheerfulness, helpfulness, and an anticipation of clients' needs are required of the staff who work in the London booking office.



cumstances, except in emergency, should staff run. Nothing is more likely to disconcert a passenger sitting in a vibrating aircraft just before the chocks are removed than to see a man racing across the tarmac. The passenger will not appreciate that the man has only forgotten to remove the ship's papers from another aircraft, or is merely hurrying to be first in the canteen! He will fear the worst, and staff are trained to overcome such fears by calm routine; by appearing to have an exact knowledge of what they are doing and what is going on.

Politeness

B.O.A.C. staff are taught that there is more to politeness than just good manners. During the course of their training, they are instructed in methods of addressing passengers, either singly or collectively. People resent being mumbled to just as much as being shouted at, so staff are exercised in speaking in pleasantly modulated voices, not too firmly nor too casually. The effective use of words is also studied. For example, instead of announcing "No smoking, please," staff are told to use the phrase, "Would you dispose of your cigarettes now, please?"

The art of saying "no" is one of the important lessons taught. It is pointed out that by the intelligent use of words and attitude it is possible to receive the passenger's warmest *thanks* for *refusing* to carry out his request! A rigid rule is that staff must never argue with passengers. Gentle reasoning is the answer here. And there must be no recriminations between staff in front of passengers—a good rule in any business. The public generally is not interested in departmental faults or friction, and they receive a bad impression if they hear about them.

Where possible, staff are encouraged to address passengers by their names. Often, of course, this is impracticable, and staff are instructed to use the term "Sir." But they are warned against over-using "Madam." When on duty, the formal Mr., Mrs. or Miss is used for addressing colleagues.

Cheerfulness

Staff are expected to be cheerful without being hearty or over-familiar in their dealings with passengers—even if they are tired after a long spell of duty. Miserable or solemn staff can, by looks alone, create resentment in a client, who immediately feels that he is being regarded as a nuisance, rather than that the staff are there to serve him. The rule is that staff must carry out their tasks helpfully and pleasantly as though they enjoyed what they are doing for no other reason than that it gives them pleasure to render service.

Appearance

One's personal appearance generally makes the first impression, and since staff may see passengers only for a few minutes or even seconds, the Corporation are particular that their appearance at all times must be of the highest order. Jewellery, other than a simple ring, is not allowed, uniforms must be properly pressed and cleaned, and ties must be neatly tied.

Correct posture, too, is important. Guidance on walking and standing elegantly is given to staff. Smoking in front of passengers is expressly forbidden, and smoking in uniform at any time must be done without appearing slovenly.

Telephones and public address systems are important links in airline communications, and staff are taught how to use them properly. In training, typical circumstances are simulated. For example, the telephone rings when staff are busy dealing with clients at the counter. One of three things can be done. The instrument can be left to ring; staff can suspend what they are doing and talk at some length to the caller; or they can acknowledge the call, explain its inopportunity, and ask for a number which can be called back. Obviously, the third is the correct procedure—but only if a return call is made within a reasonable time.

Some staff inevitably have voices unsuitable for a loudspeaker system. In training, their deficiencies are explained to them and they are given

guidance in ways to produce a more effective elocution. They are instructed to prepare announcements beforehand, whenever possible. Conciseness and brevity are the golden rules. The ideal microphone announcer, staff are told, is he who speaks as though he is trying to explain something to an aged, slightly hard-of-hearing old lady, of whom he is particularly fond.

It is the policy of B.O.A.C. that their staff, particularly those who come into contact with the public, should have an accurate general knowledge of the Corporation's background and scope of operation. In most cases this is done by means of a lecture from a senior executive. Their belief is that an informed staff is a confident and efficient staff. Besides enabling them to answer general questions about the Corporation put to them by the travelling public, B.O.A.C. also believe that this policy helps to build up company pride and team spirit.

Having set standards for their staff, the Corporation take pains to ensure that they are upheld. Senior executives make use of "reminder" circulars to staff to keep them up to scratch. To avoid odious reiteration, these usually contain some new thought or angle on the Corporation service. For example, a typical letter, sent out to all traffic staff, by D. O. Bustard, the Traffic Manager, contained the following guiding principle:

"Do not let your enthusiasm cause you to strive for perfection in everything you do. Concentrate instead on making sure that every single aspect of your work is just 'plain good.' This target is not only a reasonable one but it is clearly capable of achievement. Mark you this, if everything that we do is just 'plain good' the sum effect from the public's standpoint will seem to be something approaching perfection."

Letters are also occasionally sent to supervisory personnel. One point which is impressed upon them is that their own personal reputation is in the hands of their staff. They should concentrate on seeing that their staff are a credit to them, for that is the yardstick by which they and the Corporation will be judged. This same policy applies to all of the Corporation's staff, from the chairman down.



Lectures on the Corporation's history and scope of operations are given to staff who make contact with the public.



Employees' suggestions are judged by the joint production committee at Kelvin and Hughes' Barkingside factory. Here Stanley Bracken, instrument maker, receives the 1955 Star Award for the year's best suggestion from F. W. Bates, works director.

the evening is devoted to social activities.

In addition to explaining how Exide batteries are made, the film shows the products in use in various countries, and emphasizes the world-wide nature of the company's after-sales service.

ENCOURAGING IDEAS

AN instrument maker at Kelvin and Hughes' Barkingside, Essex, factory has won the 1955 "star award" of £25 for the year's best production suggestion. He invented a simple but highly ingenious hand-tool which enables screened electrical cable to be stripped in about one-sixth of the time taken before. An application is being made for a provisional patent to cover it.

Already the suggestion has earned this employee—34-year-old Stanley Bracken—a total of £32 10s. in company awards. It may continue to earn "bonuses" if it is adopted by the other factories in the Kelvin and Hughes group.

The "star award" system is a notable feature of the down-to-earth suggestions schemes which their three factories have been running successfully for a number of years.

Employees' suggestions, submitted on special forms obtainable from "shop clerks," are considered at monthly intervals. After they have passed through the personnel department, the time and motion study department (where they are vetted for practicability), and the drawing office (if tools or fixtures have to be designed), the suggestions are judged by a technical sub-committee.

This is composed of five people: the works manager, the personnel manager, the chief draughtsman and two employees' representatives. The sub-committee makes recommendations to

the main committee, which authorizes immediate payments of between 30s. and 40s. for approved suggestions.

Three months later each approved suggestion is reconsidered to see how (or whether) it has worked in practice. If it has given good results, an additional payment of £5 is made. On its own initiative, the joint production committee occasionally makes payments of less than 30s. for promising but undeveloped ideas; these reward the "thought involved".

The best suggestion of every month gets an additional award of £1, and of course is considered for the year's "star award." All suggestions, whether or not they succeed on their home ground, are sent for consideration by the joint production committees at the other factories.

ELECTRONIC PAYROLL

THE first Elliott 405 unit-construction business computing system is in the final testing stages at the company's computing division at Borehamwood. It is planned to use this machine for calculating the weekly wages and printing the payroll of the entire weekly staff of Elliott Bros., beginning early this year.

Each week the computer will be fed with information on the cumulative wages and tax for each employee from the previous week's calculations, together with static data such as pension fund deductions, tax code, and national insurance. After inserting tax table information for week 52, and hours worked on various job numbers for each employee, the machine will calculate bonus hours, gross wages, tax and net wages. The results, with other details, will be automatically printed in triplicate on continuous stationery, and at the end a comprehensive statistical summary

will be produced, including a stamp and coinage analysis.

The wages and payroll calculation will occupy the computer for only a small proportion of its time; the remainder will be spent in the checking of new programmes and demonstrations of other data-processing work. A study is being made of the ways in which it can be used for production planning, including raw material and stock control and machine loading.

The 405 is a unit-construction system: a variety of optional units can be built around a "systems centre" resembling the company's 402 computer.

Among the units which are already available is a punched-card reader capable of handling standard 80-column cards at speeds of up to 600 a minute, six times the figure quoted on page 84 of the November, 1955, issue of *BUSINESS*. Other input/output and storage units involve the use of punched tape, magnetic tape and magnetic film.

Reviews in Brief

THE DIRECTORS' DIARY 1956 (Newman Neame) 35s. standard, 63s. de luxe. Specially redesigned to incorporate suggestions received after a questionnaire had been sent to more than 1,000 users of the 1955 diary. Planned in consultation with the Institute of Directors.

THIS IS INDUSTRIAL PARTNERSHIP by HALFORD REDDISH (Staples) 2s. A pamphlet describing the Rugby Portland Cement scheme for employee-shareholding.

THE PROFIT-SHARING SCHEME OF IMPERIAL CHEMICAL INDUSTRIES LTD. Available from I.C.I., Millbank, S.W.1., to company executives contemplating starting similar schemes.

ORAL COMMUNICATION IN BUSINESS by D. C. PHILLIPS (McGraw-Hill) 25s. An American text by the head of the Speech and Drama Department, University of Connecticut, giving guidance on speech-making, handling a conference, sales presentation, etc. Somewhat theoretical.

"TAXATION" MANUAL by RONALD STAPLES (Taxation Publishing Co.) 25s. Eighth edition of a standard guide to the law and practice on income tax and surtax.

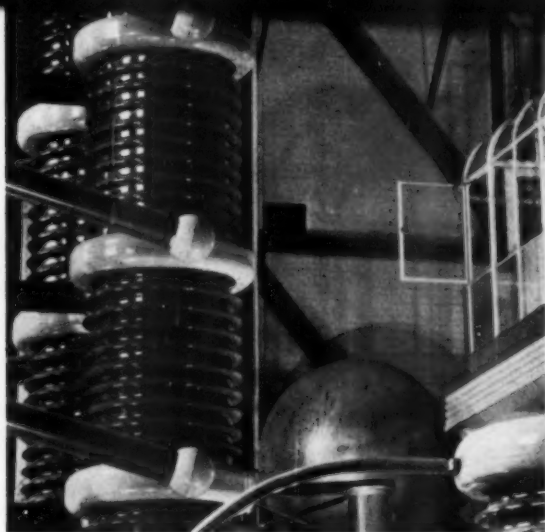
SPEAKER'S HANDBOOK OF EPIGRAMS AND WITTICISMS by H. V. PROCHNOW (Thomas, 111 Buchanan St., Blackpool) 36s. Classified by subject, in alphabetical order.

MAKING YOUR SALES MEETING SELL by E. J. HEGARTY (McGraw-Hill) 30s. Very practical—includes a list of over 200 ideas for stunts and gags.

HOW I MULTIPLIED MY INCOME AND HAPPINESS IN SELLING by F. BETTGER (Windmill Press, Kingswood, Surrey) 15s. A very personal style of writing about actual experiences.

HOW TO LIVE 365 DAYS A YEAR by J. A. SCHINDLER, M.D. (Thomas, 111 Buchanan St., Blackpool) 21s. An easy-to-read American book of "simple-to-give-but harder-to-follow" advice.

CANTEENS IN THE U.S.A.—No. 1 by WINIFRED McCULLOUGH (Industrial Welfare Society Inc.) 3s. This is the first of three booklets describing the author's observations during a ten-week tour of inspection which took in 30 American industrial cafeterias and three universities where catering is taught. In 21 pages it deals succinctly and informatively with policies, premises and equipment.



The transformer tester at the National Physical Laboratory, Teddington

SCIENTIFIC RESEARCH

What it Can Do for Industry

By ALAN WHITEHEAD

THERE are today many ways in which science can be—and is being—of invaluable use to industry. Before the first world war scientific research and industrial management for the most part went their separate ways—in this country at least. Two major wars, however, have helped to demonstrate that it does not pay to neglect research. Moreover, this has been borne out by the success of other countries. In particular it was the loss of valuable markets to Germany in the early part of this century that awakened British industrialists to the realization that something had to be done about scientific research. Now there are relatively few industries which do not owe some benefits to research.

The layman's idea of research is still largely a picture of a laboratory in which white-coated "boffins" peer down microscopes and discover things

that have only a remote bearing on everyday life. But the picture is untypical. Scientists often take time—a seemingly indefinite time—over their experiments and deliberations, but the practical value of their work is no less real for that. They can offer prospects not only of new processes and products and better ways of approaching tasks, but can actually show where money can be saved. A manufacturer may, for instance, suspect that certain manufacturing conditions are adversely affecting his products. To improve the conditions will very likely involve considerable expense. But it may be possible to simulate the conditions in a laboratory, on a small scale, and the results of tests might indicate, at relatively little cost, whether, in fact, the measures proposed to improve the manufacturing conditions would be worthwhile.

A company may obtain the benefits

Industrialists can no longer regard scientific research as being in an "ivory tower," dabbling only in theories. Research not only indicates ways in which products and processes can be improved, but can actually save money for industry. Some of the sources from which industry can obtain scientific information are outlined in this article, with a brief account of some forms of research at present being carried out.

of scientific research from various sources, among the chief being:

- 1—Its own research laboratory.
 - 2—Government-sponsored research facilities.
 - 3—Industrial research associations.
- It is proposed to indicate in this and a subsequent article the type of help which may be obtained from each of these three sources.

Company Research

Case History. The General Electric Co. Ltd. have extensive research facilities in their laboratories at Wembley. The company manufacture a wide range of electrical and electronic products, and the laboratories comprise a number of units, each responsible for research into a particular field of the company's activities.

One group, for instance, conducts research on cathode ray tubes. In recent years this type of research has been intensified by many firms. There is strong competition to reduce costs of manufacture and to improve the quality of the tubes. The larger television screens now available make it particularly important that cathode ray tubes should be free from any defects, and maintain brightness and picture quality.

G.E.C. have recently extended their facilities for this type of research, so



At the laboratories of the General Electric Co. research is conducted into the process of "screening" cathode ray tubes

Wherever new or serious screen defects are found, the cathode-ray tube is dismantled and the screen examined from the inside—the side which will be bombarded with electrons when the tube is in operation. The facilities available for such an examination include chemistry, X-ray diffraction and electron microscopy



that the laboratories are now able to accommodate a greater number of experimental batches—as required with the larger screens.

Research on cathode ray tubes at G.E.C. is divided between three laboratories. Each concentrates on a particular function in the processing of tubes. One is the screening process, which involves coating the tube with the materials necessary for fluorescence.

In the screening research laboratory, as elsewhere, the work is divided into two categories:

1—Fundamental research — work which may take several years to show results.

2—Short-term research—dealing with the factory's everyday problems.

Five science graduates are employed in the screening laboratory, together with assistants and engineering personnel. A lot of their work is concerned with trying to find new methods of production, to improve the quality of the product and lower costs.

The development of a new manufacturing technique generally involves two major studies: (a) the technique itself and (b) the materials used. To indicate the type of research work done, it is proposed to describe the preparation of a fluorescent screen. The work is done in two stages, known as filming and screening, respectively. In the

former, fluorescent powder is allowed to settle on the inside of the glass bulb through a cushioning liquid. All excess liquid is then allowed to drain off by decanting. Because the phosphorous screen at this stage has a granular structure it is necessary to bridge the gaps by covering the powder itself with a thin skin of foil before the reflecting aluminium coating is applied by evaporation. Hence the name "filming"—the applying of a thin film of an organic liquid so that it covers the phosphorous. And this may be applied in a number of ways.

"Filming" Process

For example, the irregularities in the screen structure of the phosphorous can be filled with water which is then frozen. A solution of the film-forming material in a volatile solvent is then made to flow over it and the solvent removed by evaporation. After the film has completely solidified, the temperature is raised, the ice melted and the resulting water dried out of the screen by evaporation.

Alternatively, in the flow-filming method, after filling in the structure of the phosphorous screen with water, a solution of the film-forming substance can be allowed to flow over it. The film is then dried out as previously. In yet another method—the flotation

process—the film is formed on the surface of a water pool covering a screen. This is achieved by dropping a small quantity of a solution of the film-forming material in a volatile water-insoluble solvent on the surface of the water, and allowing it to spread. When the film is set, the water is siphoned off or decanted away and the film thereby deposited on the screen. Any residual water held in the screen can then be removed by evaporation through the film.

Experimental work on both the flow-filming and the flotation-filming processes is in progress at the present time. In both cases the delicate nature of the operations involved means that the maximum possible degree of mechanization is required to give the optimum yield of perfectly screened tubes. One example of automatic operation is the development of an automatic pipette for use in the flotation-filming process. This equipment delivers an accurately measured quantity of the lacquer, which will then spread to form a film. (Such research is a long way removed from electrical engineering, or even electronic engineering, the two product fields of the company, but it is none the less necessary if products are to be improved.)

Experiments are also being conducted to determine what effect

atmospheric conditions have on the production of cathode ray tubes. It was not known previously exactly what effect such things as excessive humidity had on the tubes under manufacture. To be on the safe side, the company could have installed humidity-control apparatus in the factory and watched results. But such a large-scale experiment would have been very expensive. It was much cheaper to build an experimental conditioned chamber in the laboratories and simulate production under varying atmospheric conditions.

In these experiments, now being conducted, the effects of temperature and air pollution will also be measured. If the experiments show that air-conditioning equipment is unnecessary the company will be saved considerable expense. This is one example of how research can save money.

As suggested earlier, the quality of raw materials used in their manufacture is one of the many factors affecting the performance of TV tubes. When there is a tendency for the quality of materials to change, almost imperceptibly, the final product may easily be reduced to a lower standard, for no obvious reason.

The laboratory have therefore attempted large-scale experiments in which they deliberately cause such tendencies to occur, a note being taken of what happens. One such experiment involved 450 tubes. There are about a dozen major processes in the manufacture of the cathode ray screen. If each process gives only one per cent faults, the cumulative total will be high.

In carrying out these experiments the laboratory makes use of statistical quality control methods to indicate which tendencies are responsible for certain faults in the finished article. To do this, charts are kept for each experiment. The charts indicate by a succession of dots when a certain process is "going out of control"—that is, when it is about to exceed the tolerance which has been specified for a process. The specification is indicated on the chart by control lines. (Applications of statistical quality control were described in the October, 1955, issue of *BUSINESS*, P. 109.)

There is a liaison officer at Wembley whose task is to act as a link between the factory and the laboratory. He studies factory problems which might

One important function of the D.S.I.R. is to operate or help finance industrial research associations. Measuring the shrinkage of concrete at the Building Research Station

be helped by research. Each month the heads of the research laboratory meet their opposite numbers on the factory floor (works manager and his assistants). The works representatives present their problems and the research staff suggest where they can be of assistance.

There is no clear-cut line between fundamental and short-term research. Sometimes research on a factory problem leads to a discovery which may have far-reaching effects. On the other hand, fundamental research may bring to light a method of meeting an everyday problem.

Government Facilities

D.S.I.R. Not every company, of course, can afford or justify their own research department. This does not mean that they must be cut off from scientific development. The Department of Scientific and Industrial Research can be of help to even the smallest firm. Its objects are to promote and organize research with a view especially to its application in trade and industry.

The history of the D.S.I.R. goes back to the first world war, when it was formed to aid war production and

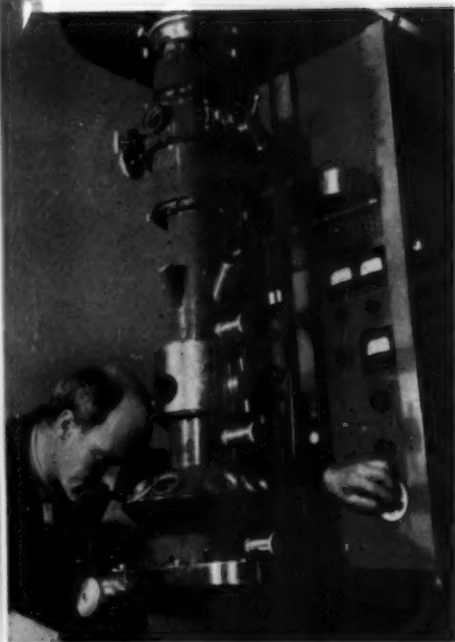
to prepare industry at large for peacetime conditions, especially the conditions it would have to contend with in competing against other countries. Like the B.B.C., it is not under the day-to-day control of any ministry. To control policy, the President of the Board of Trade appoints an advisory council, with members chosen from industry, the scientific professions and the trade unions.

Its research is largely carried out by 14 research stations, which cater for the needs of certain industries and activities not provided for on any large scale elsewhere. These range from building to geological survey, from pest infestation to water pollution.

Not all the work of D.S.I.R. is concerned with actual research. For many of the problems with which it is presented by industry, there are already known solutions, and the Department acts as a disseminator of information. Another of its functions is to encourage students by direct grants, and to provide finance for the development of ideas originating from universities and other bodies.

One of the most important activities of the D.S.I.R. is to support various industrial research associations—of





The electron microscope being used for the examination of cotton fabrics

which there are over 40 in this country. The idea of industrial research associations is practically unique to Britain. Their purpose is to make available research facilities to the smaller company which could not otherwise afford them. They have only one major disadvantage for the smaller firm—the information is also available to competitors.

If say, 12 companies in a particular industry approached D.S.I.R. with a view to forming a research association where none existed, the department would ask the companies to contribute a certain sum of money. D.S.I.R. would then, generally, give one pound for each pound up to £5,000, and after that ten shillings for each pound. But although D.S.I.R. helps the research associations financially, it does not have any direct control over how they are run (except to review their grants every five years). They are controlled by councils representing employers, the unions and the D.S.I.R. There is, of course, an interchange of ideas and information between D.S.I.R. and the research associations, and among the associations themselves.

The work of a particular research association will be described in a subsequent article. At this point, however, mention will be made of how one of the research associations—the Lace Research Association—was of great assistance to its particular industry.

For many years the lace-making industry had been faced with a problem concerning the lubricant used on lace-making machines. As this lubricant came into contact with the lace itself, it was impossible to use oil, because that would have stained the lace. So graphite had been used. This, however, was not really satisfactory because although it did not permanently stain the lace, it did soil it. Also, the graphite found its way on to the hands and clothing of the machine operators, and so lace-making was regarded by workers as a "dirty job." Consequently people were not anxious to enter the industry, and the manufacturers had a serious recruiting problem. An intensive research project was carried out by the research association, and it took about three years to find an answer to the problem. A new lubricant was evolved which was efficient and yet did not spoil the material. Working conditions are now better in the industry, and this has had a favourable effect on recruitment.

The research associations do not, as a rule, duplicate work which is carried out by the research stations of the D.S.I.R. In fact the latter are specifically intended to cater for needs otherwise not covered. For example, the hydraulics research station was started because Britain was losing contracts for dams and other civil engineering projects to other countries.

Any firm can go on the mailing list of the D.S.I.R. Documentation Unit.

See this Page.

The work of the D.S.I.R. and its stations is controlled and co-ordinated by the headquarters in London. Here, too, there is an intelligence division which runs a technical library—open to the public—and employs a number of scientists. They keep in touch with all scientific progress which may have an industrial bearing, not only in this country but throughout most civilised countries. They also study industrial problems, and try to find out what research is necessary, or, on the other hand, what facilities for research should be provided.

Part of the intelligence division is the technical information and documentation unit, known as T.I.D.U. As the name implies, this provides two services to industry—documentation and technical information.

The documentation work consists of

preparing reports and digests for the "customers." There are about 1,600 of these on the books—a representative cross-section of industry, including companies, research associations and other bodies. The unit prepares what are known as United Kingdom Technical Digests. These are brief summaries of technical articles and reports which have appeared in scientific and technical journals and other sources, in the U.K. The form of publication is a stereotyped sheet, sometimes including illustrations of the process concerned.

Technical digests are also taken from continental sources, being obtained with the co-operation of the European Productivity Agency in Paris. Also, there is a series of unpublished reports, data for which comes from a variety of sources, among them the research reports circulated by the United States Government, which are not available easily to most British companies.

Any firm can go on the mailing list of the documentation unit. They merely have to complete a form stating in what subjects they are most interested.

The other part of the unit provides answers to technical queries which come into the office by letter and telephone. D.S.I.R. goes to great lengths to obtain answers to some enquiries, though the majority are not too difficult to answer. There are the research stations and associations to fall back on for information, apart from various publications and other sources of reference. If, however, no answer can be found, the question is published in a booklet, *Unanswered Questions*, which the D.S.I.R. publishes each month and circulates to a great number of organizations. Often readers of this can provide the answer.

T.I.D.U. was actually formed in 1947 to disseminate published and unpublished reports on German industry. A great deal of use is still being made by British industry of this German material. It was not until 1951 that T.I.D.U. became part of the intelligence division of D.S.I.R. and subsequently the unit widened its field to include other types of reports of British and foreign origin. In 1949 a scheme was launched to make known the contents of Russian publications and to make available translations of articles contained in them. If a translation of an article is commissioned by two firms or individuals, D.S.I.R. will pay one-third of the translation cost—which is higher for Russian than most languages.

This, the third article in the series on business statistics and market research, outlines some of the finer research techniques used in planning a sales campaign. A case history is also presented of the export campaign for Ribena.

Market Research And Advertising

HOW THE COMPLETE SALES CAMPAIGN IS BUILT UP

AN ARTICLE in the August issue of *BUSINESS* (Page 72) described the statistics available to help businessmen assess overall market trends. This was followed by an article in the October issue (page 89) describing the facilities available and the techniques being used for market research in a particular product. It is now proposed to describe how market research is tied up with the other aspects of a sales campaign, and this will be done by describing the work of the special market research departments within the larger advertising agencies.

Two Types of Research. These departments are really engaged on two types of research. First, there is that relating to the products which their clients are selling, and second, there is research into the effectiveness of the advertisements they are designing and publishing for their clients. But more than half of the research work is concerned with the products themselves.

The modern advertising agency finds it necessary to come into every aspect of the selling of its clients' goods, and not consider solely advertising matters. All aspects of the selling of a product must be carefully co-ordinated. For example, it is wasteful to place a series of advertisements in the national press if it has not previously been arranged for retailers to stock up with the goods being advert-

ised, so that when the advertisements appear, consumers may buy. The process of persuading the retailers to stock up may involve a previous programme of advertising in the trade press, it may involve preparation of display material, and a persistent series of calls on retailers by the company's sales representatives.

There are a great number of methods of testing the effectiveness of advertisements, and work in this field is still developing. It is possible, for example, to show a number of selected people two different advertisements for the same product and ask them which they remember the more easily. They may be asked which is more credible, or which, in subsequent conversation with a friend, they would be more likely to quote. Also four different advertisements may be put in the same newspaper under similar conditions to see which has the greatest "pulling power." When a new and costly campaign for advertising and selling a product is launched, it is particularly advisable to pre-test the advertisements for effectiveness.

When an advertising agency take on a campaign for a client, their market research department may handle their entire research relating to the product,

if the number of interviews involved is likely to be no more than 500 or 600. But if a larger enquiry is involved, they will probably do the planning themselves, then engage one of the market research companies to do the actual field enquiries and tabulation of results. The agency will then write a report interpreting these results.

When a market research programme is put up to a client by an advertising agency, it is sometimes possible to suggest two or three alternative programmes, on different scales, with an explanation of the advantages or disadvantages of each. Thus the client is in a position to choose, according to his financial circumstances, the scale of enquiry which he prefers.

Order of Working. When an agency takes on the launching of a product or undertakes a new campaign for an existing product, their first consideration must, of course, be a study of the overall trends of the market. Such matters as hire purchase restrictions, the level of building activity, changes in purchasing power and habits between different classes of homes—these must all be taken into account before the campaign gets under way. And the advertising agency may request the



The export campaign included redesigning the bottle labels so that the medicinal properties of Ribena were highlighted. Also a greaseproof wrap was provided to protect the bottles against spillage

client to subscribe to one of the market research organizations mentioned in the October article, who provide household, personal and retail panel surveys. This will enable the agency to study in detail the existing state of competition in the chosen field.

If the client has his own market research department, in which there is very likely a high degree of specialized knowledge of the firm's products and of the customers, then it will be necessary to co-ordinate the work of the agency and this department, so that they can help each other with statistics and advice. For example, the "inside" department may analyse the company's sales figures. If there is no inside market research department, then the agency will almost certainly want an analysis made of sales figures.

There may also be outside sources of information of value to the agency in making a survey—such as the censuses of production and distribution. Finally, the agency may prepare, in co-operation with the client's sales department, a questionnaire for specific enquiry concerning the likes and dislikes of consumers or retailers, and their views of particular products.

More Personal Research. In recent years there has been a considerable development of other, more personal types of market research. They may involve nothing more than having the help of a panel of reliable people who have co-operated in the past by giving their views on products, and are known to respond readily if sent a further request for their opinions.

The people on the panel will generally be classified, so that at short notice it is possible to extract the cards of all those over a certain age, all those with young families, and so on. Thus the agency can send out a letter to a chosen section of the panel and get quite a quick response on any one topic.

Another form of more personal research involves bringing groups of people, such as housewives, into the agency to discuss a product and its competitors, over a cup of tea. This can only be done on a small scale, and therefore no reliable statistical results can be obtained from it. But the discussion may provide valuable leads, which can form the starting point for further research. And if the discussion is carefully organized and recorded, then analysed, it is possible not only to pick out what people said but also to take note of what they did not say.

Attitude Research. Another recent development lies in the field of "attitude research." This concerns what might be called the "why" question. Whereas most early research was concerned with facts, such as *who* bought the products and *what type* of people they were, lately there has been a considerable development of enquiries into *why* people buy certain products and what are their basic preferences.

Sometimes the answers are relatively simple. For example, if a housewife is asked why she bought a certain type of gas stove, the answer may merely involve a matter of size, or the number of hot plates. But with some products,

the psychological reasons why the purchases were made, may be far more complex. This is particularly so with articles in personal use. Thus, what is known as the "depth" interview has been developed. This is not just a short interview at the door-step for 10 or 15 minutes, when a few factual questions are answered. It involves at least half-an-hour of more searching enquiry by a specially trained interviewer—often a psychologist. But when the motives of purchase have been established by interviewing perhaps 30, 60 or 90 people, it is then necessary to verify the reasons given by taking a normal enquiry sample, and asking say five questions all aimed obliquely at the same point, to see whether the attitudes of the smaller sample are typical.

Media Research. The work of an advertising agency also involves media research—that is research into the readership and pulling power of various newspapers, journals, etc. The Hulton and L.P.A. readership surveys give not only the circulation of newspapers and magazines, but also the number of people in the average family who read these papers and magazines, and an analysis by region, sex, income class, etc. Enquiry into advertising media is a full-time job for graduates in statistics.

This type of work is absolutely essential if the agency is to ensure that their clients' advertisements are placed in the most forceful and profitable media. A new development in this same field is audience research, which has become of great importance with the commencement of commercial television broadcasting.

In the eyes of the public, good advertising involves mainly the employment of highly skilled visualizers, artists and copy-writers who are capable of making a strong and compelling impression on the potential buyers of the goods advertised.

This is certainly true, but the part played by market research in advertising is also worthy of emphasis. For the visualizers, artists and copy-writers cannot do a successful job unless they are given a really factual briefing on the nature of the products being advertised, and the type of people to whom it is intended to appeal.



Advertising was initially addressed only to doctors, and the product made available only through chemists. Display cards were therefore given a medical slant

Case History

TO illustrate problems tackled by an advertising agency, we propose to describe the launching of the export marketing programme for *Ribena*, beginning in 1952. Prior to 1952, the export of this product was limited to small direct shipments from Britain to the Dominions and Colonies.

There were two reasons for wishing to embark on a major export marketing campaign. Firstly, it was very desirable to broaden the base of the business of the producers, H. W. Carter and Co. Ltd., and secondly, it was thought advisable to take advantage of the favourable sugar allocation given to exporters by the Government during the time of rationing. *Ribena* is made from blackcurrants sweetened with cane sugar. It has a high vitamin C content, and is recognized by the medical profession as having considerable therapeutic value.

The existing export department of H. W. Carter was too small to handle the much bigger operation envisaged, and accordingly the board called upon Colman, Prentis and Varley Export Ltd. to advise on and to conduct the new venture.

The agency's first action was to second to Carters one of their executives as export manager. He was to act under a joint committee consisting of the board of Carters and certain executives of the agency.

The product was studied and its suitability assessed for different world

markets. Initially certain markets were chosen in which, from past experience, it was considered *Ribena* would be most successful.

The first point to be considered was whether the product as it was then made and bottled would retain its qualities when shipped overseas in quantity.

Its ingredients were judged against the medical regulations and climatic conditions of each particular market.

The price of the product was increased by 33½ per cent, to allow a gross margin adequate to pay for the marketing venture. Although Carters feared that this increase in price would discourage overseas agents from buying, the higher price was in fact generally accepted abroad, with only minor protests.

A major decision in marketing policy was to make use of *Ribena's* background as a medical product. So important had it been considered medicinally during the 1939-1945 war that the Ministry of Food had limited its sale to expectant and nursing mothers. Doctors in Britain were very much in favour of the product and it was decided that when export marketing began the company would not worry too much at first about persuading the public of the value of their product. They would concentrate initially on making overseas doctors pro-*Ribena*. Overseas doctors would in the main not be aware of the background of the product in Britain and of its connection with the Ministry of Food.

Therefore the first campaign, commencing January 1953, was aimed directly at doctors, and where possible distribution of the product was limited to pharmacists—it was not sent to grocers and cafes.

The former export label was not considered wholly suitable as it did not contain sufficient information about the medicinal properties of the product. A new export label was designed, containing the type of information that would appeal to doctors and pharmacists. Moreover, the labelling was done in such a way that for a bilingual country where, for example,

English and another language were spoken, the label on the front could be in English and a similar label on the back in the appropriate foreign language.

A new export carton was designed to cut expensive crating charges, withstand breakages, reduce freighting costs and ensure correct stacking. Because of language difficulties this carton was not covered with the usual phrases "this side up" and "glass with care." Round the side of the carton were drawings of bottles of *Ribena*. Only a completely stupid transport labourer could possibly fail to notice that the carton contained bottles and which way up it should be stacked.

It was decided that instead of shipping the bottles overseas in large packing cases as formerly, they could go straight into the hold of the ship in cardboard cartons with just a steel band round the carton. Each carton contained one dozen bottles.

Steps were taken to ensure that adequate distribution and stock holdings were available in the selected markets. Following the special advertising in overseas medical journals during the first six months of 1953, advertisements were produced, aimed at the nursing profession and placed in selected nursing journals.

At the same time a special trade booklet "Selling *Ribena*—Information for Distributors and Salesmen" was produced and widely circulated. In some of the selected markets, advertisements were released in the trade (*i.e.* pharmaceutical) press (*e.g.* South Africa and New Zealand).

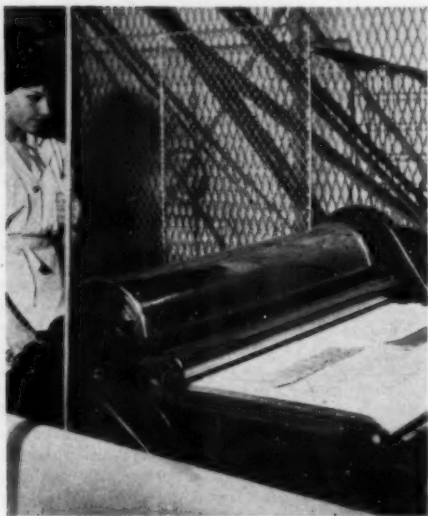
In the latter part of 1953, a series of consumer advertisements was prepared designed to do four things—first, to make people aware of the value of vitamin C; second, to stress that *Ribena* is a natural product; third, to be in accord with the new policy of selling *Ribena* as a semi-ethical product; and fourth, to interest the consumer and at the same time maintain the goodwill of the medical profession. It is no easy matter to persuade doctors to recommend a product, and at the same time persuade the public to buy it.

Continued on page 142



The advertising agency installed one of their own employees on the company's premises as export controller, and an export committee was set up including executives of the company and of the agency

See this page



Some laundry jobs require a high measure of skill, such as the hand pressing of pleats, while others, like the machine finishing of collars are semi-automatic. Both types are included in the training programme, therefore many of the operators are interchangeable



Photo by courtesy of 'Target'

Since the inauguration of their training scheme, some five years ago, Brooks' Dye Works Ltd. have been able to look ahead with confidence to the years when their supervisors and manageresses have to be replaced by new blood. For the scheme singles out potential management at the tender age of 15 or 16, and provides them with every facility to make the grade. This article describes the steps taken over the past five years which have resulted in the present set-up.

PREVIOUS articles in this series on "operative training" have dealt with schemes for improving and developing the manual dexterity of female factory workers on specific operations. The training scheme for young girls, run by Brooks' Dye Works Ltd.—a large laundry and dry cleaners in Bristol—is planned on a much broader basis. It offers young girls leaving school supervised on-the-job training in *all* departments of one of the works (the laundry is separate from the dry cleaning department); courses dealing with the theoretical side of laundering; the chance to become a supervisor, or even a manageress; weekly recreational periods; and visits to other works in allied industries.

In addition to increasing efficiency in the works and improving service to customers, this all-embracing scheme has fostered a great team spirit amongst the workers.

Brooks', a family business, were founded in 1819 as a firm of dyers. Since then, due to the family's far-seeing policy, they have steadily developed, and today they are one of the most modern firms of launderers and dry cleaners in the country, employing nearly 400 women. There are more

than 50 branch receiving shops, covering a radius round Bristol of 50 miles.

The company's interest in a training scheme was aroused just over five years ago, when an acute shortage of new entrants was causing them some concern. Up to that time, training was very much a "get on the best you can—the others will help you" affair. Not that this system had revealed many drawbacks in the past. The staff turnover rate was remarkably low. A very high percentage of the older workers

How to Pick and Develop Future Supervisors

By JOHN A. ASH



To help maintain interest in the scheme after trainees have passed the "green" stage, visits to works in allied industries are arranged—for example, a soap factory

at Brooks' had joined the firm as young girls—as long ago as 40 years in some cases.

But the modern girl was seeking a more glamorous-sounding occupation, and Brooks' found that replacements for their retiring workers were not forthcoming. This problem was thoroughly discussed by the management, and it was decided to establish an operative training scheme for young girls. They felt that in addition to increasing the firm's efficiency, it would attract enough girls to fill the vacancies. It was not their aim to lay down a strict scheme, but rather to develop and augment their existing system, until it was 100 per cent acceptable to both company and trainees. Above all, they wanted to retain the "family atmosphere" in the works.

The scheme was launched in a small way in 1950. Run in the evening, after working hours, it consisted of classes, lectures, demonstrations and film shows dealing with the technical side of laundering. This format was tried for two years, but met with only moderate success. There was something missing. After due consideration it was decided to co-relate technical training in the evenings with extra training within the works.

Where possible, girls were moved round the laundry from job to job, until they had a reasonable working knowledge of other jobs besides their own. After a year an examination was held, and the girls who had taken part in the training scheme were asked to bring in their family's weekly wash.

Each girl was responsible for laundering this wash from start to finish, thus embracing every process in the laundry. A local celebrity was called in to judge the best performance.

Another development in the scheme at this time was the introduction of a weekly recreation period. The management considered that this would help young girls leaving school to adapt themselves to factory life. A former public school mistress was employed part-time, and the recreation periods included instruction in eurhythmics, modern ballroom dancing, country dancing and netball.

Again with an eye to the old adage "All work and no play makes Jill a dull girl," they also introduced lectures of general interest. To help the girls in their "growing up" stage they arranged for people such as doctors and beauty experts to give lectures.

More Incentives

By 1954, Brooks' felt that they were getting near to a scheme which suited them—and more important—the girls. But four years' experience had taught them something which was to shape the scheme as it is today. They found that while some girls thrived on extra knowledge, and were revealing themselves as potential supervisors, others were taking little or no interest, thus making little progress themselves and, to a certain extent, holding up the keen girls.

The company felt that more incentives

were called for, and that promising girls should be singled out for special training. So they divided the girls into three categories:

A. Potential management.

B. Potential supervisors.

C. Average factory operatives.

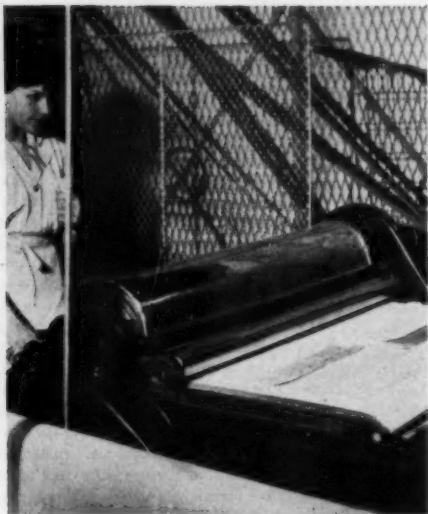
Group A were the really "bright" girls. In addition to comprehensive "on-the-job" training, they received advanced theoretical training with a view to obtaining the City and Guilds Diploma of Laundry Technology. The company provided text books, paid for evening classes at a local technical school and (eventually) the examination fee.

Group B were intelligent girls who showed interest in the scheme. They received "on-the-job" training plus theoretical training.

Group C were the girls who, the management considered, were suitable for only one job in the works. These were the girls who had shown little or no interest in the training scheme. They received normal "on-the-job" training.

All groups took part in the weekly recreational period.

This method of classifying the girls was found to be highly successful. With the extra incentive, some of the girls from Group B and C worked harder and warranted promotion; girls from Groups A and B whose interest waned had to be demoted. Promotion and demotion were facilitated by the fact that every job was on an incentive bonus—reference to the daily production figures soon revealed whether girls



Some laundry jobs require a high measure of skill, such as the hand pressing of pleats, while others, like the machine finishing of collars are semi-automatic. Both types are included in the training programme, therefore many of the operators are interchangeable



Photo' by courtesy of 'Target'

Since the inauguration of their training scheme, some five years ago, Brooks' Dye Works Ltd. have been able to look ahead with confidence to the years when their supervisors and manageresses have to be replaced by new blood. For the scheme singles out potential management at the tender age of 15 or 16, and provides them with every facility to make the grade. This article describes the steps taken over the past five years which have resulted in the present set-up.

How to Pick and Develop Future Supervisors

By JOHN A. ASH

PREVIOUS articles in this series on "operative training" have dealt with schemes for improving and developing the manual dexterity of female factory workers on specific operations. The training scheme for young girls, run by Brooks' Dye Works Ltd.—a large laundry and dry cleaners in Bristol—is planned on a much broader basis. It offers young girls leaving school supervised on-the-job training in *all* departments of one of the works (the laundry is separate from the dry cleaning department); courses dealing with the theoretical side of laundering; the chance to become a supervisor, or even a manageress; weekly recreational periods; and visits to other works in allied industries.

In addition to increasing efficiency in the works and improving service to customers, this all-embracing scheme has fostered a great team spirit amongst the workers.

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This method of classifying the girls was found to be highly successful. With the extra incentive, some of the girls from Group B and C worked harder and warranted promotion; girls from Groups A and B whose interest waned had to be demoted. Promotion and demotion were facilitated by the fact that every job was on an incentive bonus—reference to the daily production figures soon revealed whether girls

were pulling their weight or not. In this respect, a "learner's allowance", made at the start of a girl's training period and gradually decreased as the training period progressed, enabled these comparisons to be made.

Thus, the foundations of the company's present training scheme were laid. After her first month—during which she works one week in each of the four main departments—the recruit's capabilities are discussed by the departmental managers and supervisors, and she is placed in the appropriate category. She is then attached to one department.

Broadly, there are six departments in the laundry and eight in the dry-cleaners. The laundry departments are, identification and checking; classification; washing, finishing (which is split into two sub-departments, the calender department and the press department); reassembly, and packing. Although a fair measure of skill is required in all departments it is in the classifying and the press departments where most skill is required. In the classifying department the laundry has to be divided into over twenty classifications for the various washing processes (silks, for example, are not washed in the same way as woollens). Operators must be able to recognize the various materials by their look and "feel." And it is many years before the operator becomes proficient.

In the press department, although the finishing of shirts, coats, dresses, etc. is done by automatic presses, a high measure of skill is needed when feeding the garments into the presses.

The dry cleaning factory is split into eight similar departments, but it is clear from the varying work in the laundry alone, that a girl who wishes to become a supervisor or manageress has much to learn on the practical, as well as the theoretical side of laundering.

To help to develop the qualities of leadership, initiative and self-reliance of Group A girls, the company send them, after a year's training, on one of the "Outward Bound" training courses (described fully in the July issue of BUSINESS). The girls look forward to going on the course, and it is regarded as an honour to be sent.

In the theoretical training periods, great care is taken to ensure that there is no "school" atmosphere. The classes are not held regularly in one place, but are switched from room to room each week. During theoretical training sessions the girls learn about the company's history and activities against the background of the laundr-



In the re-assembly department the work is tiring and exacting, so girls' interest and pride in their work must be kept at a high level to avoid errors

ing industry as a whole, the company's organizational structure, the wages and bonus scheme, etc. An important subject is textiles—what they are, how to distinguish them and how to deal with them. A detailed study is made of each process in the laundry.

The general manager's assistant—a qualified launderer—takes the classes, and, with the other executives, prepares the papers for the main examinations at Spring and Christmas. When the girls are nearing their intermediate or final examinations for the City and Guilds Diploma, they are separated and given special coaching. The classes, held in work's time, plus evening study at a local technical school, give the girls every chance of success. It takes from four to five years' study to pass the Diploma, which *must* be held by girls hoping to be manageresses.

But what of the gap between when a girl has ceased to be a "green" trainee, and when she becomes a manageress? Here was a problem indeed. Brooks' realized that some incentive must be maintained during that period, so they established an "N.C.O." scale. Girls are promoted up the scale, as their knowledge—both practical and theoretical—increases. The "ranks" are:

Leading Operator: These girls wear one blue stripe on the collar of their overalls, and are responsible for looking after one junior trainee.

Mobile Operator: With two stripes, these girls are capable of doing several jobs in different departments.

Junior Leader: A "sergeant," responsible for supervising five trained

operators.

Senior Leader: A further stripe. She helps in the training of junior operators and supervises ten trained operators.

Assistant Supervisor: She wears a distinctive overall. She has more to do with the training of juniors, and supervises up to 25 trained operators.

Assistant Manageress: This post entails being responsible to senior management for helping to run a department.

An important feature of this system, is that the girl who works her way up the scale is given responsibility *gradually*, thus minimizing the risk of upsets on the shop floor. It often happens, in some training schemes, that a girl who is one moment "one of the crowd," suddenly finds herself in charge of the crowd—and, of course, she has some difficulty in asserting her authority.

Visits to other firms in allied industries, such as soap works, also help to keep interest alive and give girls taking their diploma a chance to see some of the things that would otherwise be merely text-book knowledge.

That then, is the scheme today. The girls shape their own future, and if they wish to get on, the company gives them every facility and encouragement.

As well as helping the girls, though, the company help themselves. They feel that the cost of obtaining highly trained girls is money well spent. As more than half of the total turnover has to be paid out in wages each week, efficient running of the works and a contented, and therefore stable labour force, are essential.

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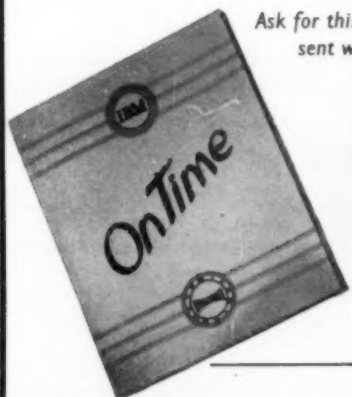
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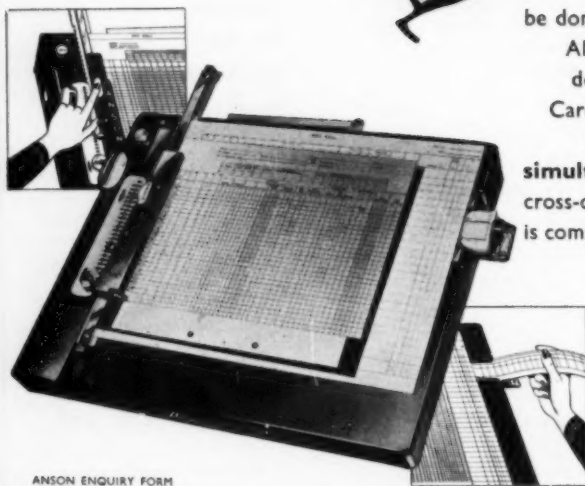
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FORM No. 127

OPERATING STATEMENT

Departmental Activity

This Period Prod. Shop % Department Ref.

This Year to Date Prod. Shop %

Direct Labour	C.C. Standard No.	Hours	Activity	Efficiency	Standard Cost	Actual Cost	Total Variance	Variance Analysis			Accumulation Periods
								Extra Allowance	Efficiency	Rate of Pay	
			%	%	£	£	£	£	£	£	£
Total - Direct Labour											
Departmental Expenses	Account Number	Control Basis	Allocation	Actual Cost	Variance	Notes	Allowance	Variance			
Foreman and Chargehands											
Shop Clerical	403	C									
Service Labour	404	C									
Overhead Allowance											

At the end of each four-week period an operating statement is produced, which records direct labour costs and expenses of each department. Twenty-three departmental expenses are listed

Standard Costing Helps to Keep Their Prices Down

By DAVID MIDDLETON

The installation of a standard costing and budgetary control system by Aveling-Barford Ltd., Grantham, has facilitated close control of all manufacturing expenses. Cost control is particularly important in their industry—making capital equipment for “earth-moving”—because competition is very fierce, especially in overseas markets.

THE manufacture of capital goods for the “earth-moving industry” is a field which, during the last few years, has become intensely competitive. Aveling-Barford Ltd., one of the oldest and best-known British companies in this industry, have since the end of the war encountered fierce foreign competition, and have reported that prices quoted have consequently to be extremely keen.

Their German competitors, for example, have exploited their lower production costs to quote rock-bottom prices for such products as road rollers.

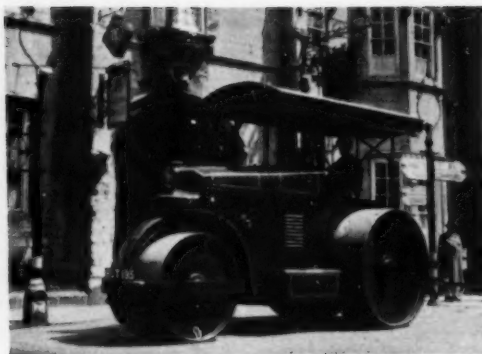
As a result, Aveling-Barford, like other British firms, must work on a minimum of profit and keep their prices as low as possible. This is made more difficult because of the fact that in this industry the customer expects quick delivery, and therefore, products

must be made for stock in anticipation of orders. They cannot afford to be in any doubt about the costs of their manufacturing processes.

One of the ways in which they have controlled costs has been to install a standard cost and budgetary control system.

The company make about 20 products, consisting of road rollers, power graders, dumpers, excavators, trenching machines, small bulldozers and other equipment. About 70 per cent of the output goes for export.

The company have two factories, the main one at Grantham and a slightly smaller one at Newcastle. To give an indication of the size of these works, the former employs over 1,100 people, 800 of whom are in the workshops. At Newcastle 500 are employed (350 in the workshops). The shops at both factories have been planned to ensure that the movement of parts throughout



About 70 per cent of Aveling-Barford's output is exported



the various processes is kept to a minimum. Production is continuous.

They introduced standard costing and budgetary control in 1947. Previously, they had operated a form of job-costing. This, however, was purely "historical"—the information it provided came too late after events had occurred for it to be of great use for control purposes. The new system, on the other hand, gives all necessary data within 10 days of the end of each four-week accounting period. Apart from this rapid availability of results, there are other major advantages:

- 1—A wealth of information, not available hitherto, is provided.
- 2—Because of the system, responsibilities for various costs have been clearly defined. It is possible therefore, to decide if any individual has exceeded the amount allocated to him.
- 3—For each of the 13 periods into which the year is divided for purposes of the system, the amount of work which must be completed, and the consequent results, are known.

The new system was installed by a firm of business consultants. The decision to employ consultants was influenced by three factors: (a) To have installed the system themselves, Aveling-Barford would have had to relieve two or three responsible people of their normal duties, and this was not practicable; (b) there is less friction if an outsider recommends certain action to be taken than if this is done by a member of the firm, and there is more likelihood that the recommendation will be carried out in the former case; (c) it is usually advantageous to get an outsider's point of view, especially that of someone with a wide experience of the application of such systems—a company's own employees are often



"too close to the job" to take a clear, objective view.

The system installed follows, fundamentally, the normal standard costing and budgetary control system usually associated with engineering concerns making standard lines. There are, however, certain refinements and extensions, arising from the information thrown out by the system as a matter of course.

Five-Year Plan

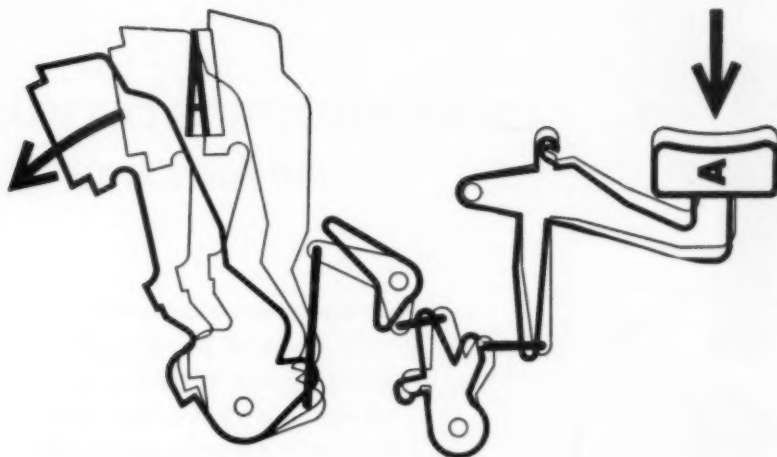
The costing department are responsible for running the system. In addition, standard costs they work in close co-operation with the planning department. Although the system is operated from the head office at Grantham, for the purposes of the system the two factories are regarded as one.

Each department, comprising a major workshop, is a costing unit. Most departments are broken down into cost centres. For example, the machine shop department has 10 cost centres, each of which covers a group of similar machines, such as heavy turning, milling, gear cutting, etc.

The company work on a "five-year-plan" basis for the purpose of setting standards for labour, expenses and materials. They also decide on a normal level of production for that period, which in turn is governed by the capabilities of the factory and the anticipated sales.

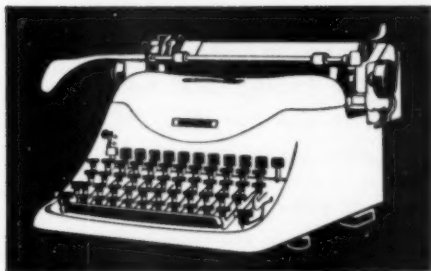
Standards are set at the beginning of each five-year period. These cover all the costs of the activities in which the workshops are engaged and all the materials used. The figures are arrived at mainly in the light of past experience. These standards are kept for the entire period, but at the end of each year they are reviewed. If there has been a major wage increase during that year, then the appropriate standard is revised. Again, if the price of steel, say, has increased by at least 10 per cent and is likely to remain at that level, then the standard will also be changed. Only important alterations in prices are taken into account however, and the normal fluctuations in raw material prices do not affect standards. In other words, the company attempt to foresee the level of production and prices five years ahead so that by the end of

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that period the divergence between standard and actual costs will not be of such a magnitude that control will have become impossible.

The basis of measurement is what is termed the standard hour of work. This can be briefly defined as the amount of work which an average operator can be expected to produce in one hour. This amount of work is calculated by the planning and rate-fixing department, and is used in the setting of allowed piecework times. Then the number of hours which each department is capable of producing in a four-week period is assessed. By comparing standard hours produced with actual hours worked a measure of efficiency for each department can be obtained. It follows that if the number of hours worked increases the output expressed in standard hours can be expected to increase up to a certain limit, though the efficiency may fall.

Budget Allowances

At the beginning of each period, a budget is prepared allocating a set allowance for each departmental expense. These allowances, which are the expected expenditure for normal output, will be fixed in accordance with actual output, though not necessarily in direct relation to it.

Knowing the number of standard hours which each cost centre can be expected to produce, the standard cost is then ascertained, having regard for the standards the company have set for labour costs.

At the end of each four-week period the costing department prepare certain statements covering all aspects of works costs. The information for these statements emanates from various documents used in the shops, chief among them being job cards and material requisition forms, which are completed and sent in by supervisors.

The operating statement covers the activity of each department. It is divided into two sections. The first covers direct labour costs of each cost centre. It shows the standard hours, and the actual number of hours is expressed as a percentage of the standard hours. Standard cost is compared with actual cost and the difference is recorded as the total variance. This variance is then analysed, allowances being made for changes in rates of pay and other matters. A total is also shown which gives the accumulated allowances and variances for the previous periods.

The other section records the 23 departmental expenses which cover everything which can be reasonably charged, and include such things as the tuition of trainee personnel, overtime allowance, faults, fuel, etc. The allowance is compared with the actual cost and the variance is shown. There is also a total of allowances and variances for the preceding periods. On this statement, variations which adversely exceed the standard are shown in red, so that a glance at the statement shows immediately if anything is wrong.

In this statement the materials are shown in bulk. There is another statement, known as a materials analysis, which gives a complete break-down of all materials used. This, too, compares standard costs with actual prices and analyses the variances.

A summary operating statement is produced from the operating statements. This shows the total standard costs, actual costs, etc., of each department. On this statement, however, the variance analysis goes into greater detail. It indicates those variances which cannot be controlled—for example, wage increases and fluctuations in prices of materials, over which the company have no jurisdiction—and those which can.

From these documents a profit and loss statement is produced. By deducting the manufacturing standard cost from sales figures, the gross manufacturing profit is ascertained. By further deducting the total cost of variances from this figure the net manufacturing profit is reached. To get the net operating profit further deductions (selling expenses, administration and engineering) must be subtracted. Finally, other additions (income on investments, commissions, plant sales, etc.) and deductions (bank interest, new jigs and tools, etc.) must be made to arrive at the net profit or loss made by the company in one four-week period.

Correcting Faults

As all these documents can be completed within 10 days of the end of each four-week period, the works manager can take action immediately if any deficits are shown. The documents are so devised that it is possible to trace any item which could cause such a deficit back to its source, which is, of course, the first step in rectifying any fault.

For instance, if a workshop had used too much material, or had spent too much time on a job, it would be shown on the operating statement.

All the items on the operating statement relate to the works only, in that they cover the expected costs of labour and materials. Allowances have to be made for the administrative department, drawing offices and selling organization, and control must be exercised over them, but they are not part of the system, as such. But to take an example of how they are controlled, if the output of the works remains constant, the company would not expect to see the administrative department considerably increase the number of its staff.

Using the System

It is not possible to link up directly the functions of these three departments with that of the works, because often they are operating ahead of production. Administration and selling, for instance, must continue normally even if works production is low. The system, therefore, is primarily for control of works functions.

The information which can be obtained from the system as a by-product is used chiefly for programming, machine-loading and progressing. Its main functions are to measure the volume of output, the efficiency displayed in producing it, and to control the cost of that output.

To run the system successfully, the lines of control must be clearly specified. It is of no use to hold any person responsible for something he is quite incapable of controlling.

But it is surprising what can be done by supervisors when they know the target that they are expected to achieve and the expenditure allowed to meet that target. They see for themselves that for skilled operators to spend time fetching materials from store, for machine tools to be idle for any reason whatever, or to use excessive quantities of consumable supplies, are all uneconomic activities which will work against them.

The staff who operate the system need to have a thorough knowledge of the functions of all departments. About seven people are employed continuously on it.

The system, as stated previously, has helped considerably in lowering costs. That this policy of controlling costs is a sound one is shown by the many recent successes of Aveling-Barford in overseas markets. They have obtained important contracts in several countries in the teeth of foreign competition—notably that of America and Germany.



General routine office before and after reorganization. The improved layout of desks enables more staff to work more comfortably



Replanned Office Gives More Space

By ERIC SMETHURST

FACED with serious overcrowding, due to an increase in staff, a London firm have had their office entirely replanned. The office now accommodates adequately and comfortably a staff which has been considerably increased, and yet before the increase worked in cramped conditions. At the same time several factors which tended to inefficiency in the old office—among them, poor lighting, lack of furniture standardization and noise—have been "ironed out." The operation has been carried out without using any additional space to that which existed before, and without interfering with the firm's business.

The firm, that of a City stockbrokers', have been expanding continually since the end of the war. Faced with an even further expansion, they realized that drastic action was necessary. Their present landlords were unable to offer them any suitable additional accommodation, yet to have taken a new and larger office would have meant an increase in rent. Also, a loss of business would have resulted from a move, since the firm were well-

A London firm of stockbrokers have had their office replanned so that not only has the previous overcrowding been eliminated, but an augmented staff has been accommodated comfortably. At the same time, the opportunity was taken to "streamline" the office by improving its appearance and lighting, treating it acoustically and standardizing office furniture. The only alternative to the conversion would have been to take a new office, and the change of address would have resulted in a loss of business for the firm.

known at their address and conveniently placed. There would, too, have been an interruption of business, due partly to the delay in having telephones installed; stockbroking is a continuous business involving constant communication with clients and with dealers on the floor of the Stock Exchange, and a single day's idleness can have serious effects.

Realizing that something had to be done, the firm called in architects and

asked them to survey the office and suggest a solution.

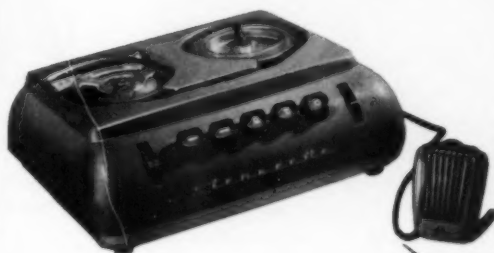
The architects, after an exhaustive study of the office and its routine, concluded that in addition to overcrowding, there were other factors which were either contributory to the main problem or detrimental to the efficient working of the office as a whole. The main disadvantages of the office were:

1. Overcrowding, due to inefficient

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utilization of existing space and an irrational layout. For example, the conference and visitors' waiting room, which was not always occupied, took excessive space in a central part of the office. Wasteful circulation area occupied potential working space.

2. Office intercommunication was not good, due to the poor relationship of rooms. Instead of the various functions of the firm being grouped together, many of them were scattered. Some of the firm's executives were separated instead of being together. A duplicating machine in the waiting space was away from the typists who had to use it. The office manager was in a corner of the building (at the opposite side from the typists) and although he could see the general routine and accounting offices, the typists, duplicating machine and reception area (functions for which he is also responsible) were out of his sight. Mail was sorted and prepared in the circulation area, through which people passed continuously, and this tended to create confusion.

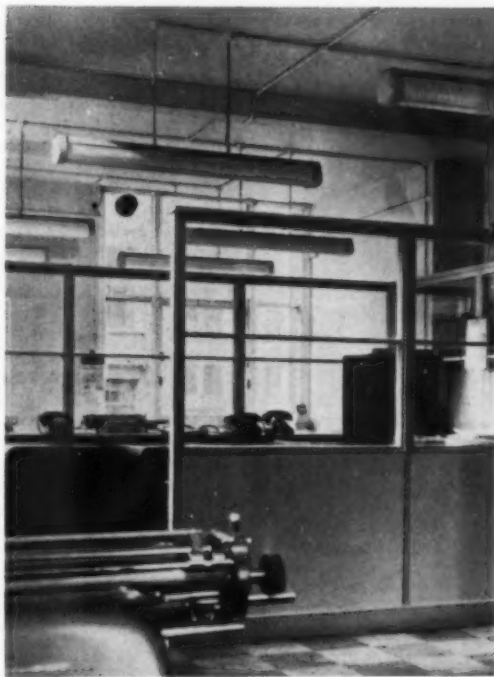
3. Some offices were noisy, and this distracted the occupants from work requiring concentration. Electric accounting machines, in a small inadequate office, were very noisy. In each of the general routine and partners' offices there were at least eight telephones, and most rooms had house phones and outside lines. These contributed to the noise factor.

4. The office furniture was not uniform. Varying in size and shape, it occupied space uneconomically. It also looked untidy, and its appearance did not incite the staff to tidiness in their own work.

5. The appearance of the office generally was not pleasant, and created an atmosphere which was not conducive to efficiency. Lighting left room for improvement, the paintwork was drab, and first impressions on visitors were not very favourable.

These problems could be tackled together (the first and second, for instance, were closely linked), and the architects eventually drew up three alternative plans, each of which offered a solution. After full discussion one of these was accepted by the firm, who, however, were insistent that its execution should not interrupt their activities. The work was, therefore, carried out in stages.

In dealing with the first two problems (overcrowding and poor relationship of rooms) the entire office space was rearranged. All partitions which were not structurally important were removed. Light unit partitioning



The new central position of the office manager, with glass partitioning around him, simplifies supervision of all clerical staff

Photos taken after reconstruction by courtesy of "Architecture & Building"

occupying little floor space has been used to enclose the new rooms, in some places half-glazed to increase visibility, light and the effect of spaciousness.

In a stockbrokers' there are two types of executive—partners and attaches. Partners, as the name implies, comprise the firm. Attaches do similar work, but are not part of the firm, as such, being remunerated on a commission basis. In the original plan not all partners were together, and attaches were similarly separated. The new arrangement has grouped all partners together in one big room. All attaches are accommodated in two adjacent offices. These three rooms, with adjoining conference room, form a compact executive group.

New Reception Counter

Nearby there is a space for auditors and records. A toilet for executives has been added. (Toilets for staff are located elsewhere in the building.) London County Council regulations prevented any removal of the passage

to the fire escape, so to get the maximum use from this passage, it was used as a passage to the executives' toilet also.

An attractive reception counter was put in, with a switchboard close by, so that the telephone operator can deal with callers in the temporary absence of other staff. (In the original office the enquiry desk was not sufficiently close to the switchboard to allow this to be done conveniently.)

Typists now have their own room in the centre of the building, so that they are quickly available to administrative offices on one side of the office and the executive section on the other. Accounting machines have been isolated in a wing of their own and partitioned off, to avoid noise interference to other offices.

The office manager's room is in a central position, so placed that he can see the typists', cashier's and general routine rooms, while easily available to partners or visitors.

The entire office is now virtually divided into two compact sections, the executive on the left and the adminis-

trative (the larger of the two) on the right. Previously, there was no clear division.

The building work was planned by the architects on a leapfrog basis. Reorganization began in the old conference room, which was prepared for the typists. When the typists moved into it, the space they vacated was made ready for the accounting machines, thus releasing further space for the contractors.

The noise problem was tackled by putting in suspended acoustic ceilings in rooms where there are several people and telephones or noisy machines. These have successfully lowered the level of noise by absorption.

Bulky office furniture was replaced by modern unit furniture. This standardization has not only saved space, but has given the office a tidy appearance.

The office was redecorated throughout. Dark colours were avoided, the aim being to keep woodwork, walls and ceilings light to give an effect of spaciousness and enhance the office's natural lighting. Gloss paints were used. New carpets were bought,

though original ones were kept where possible. Sun blinds were put in one wing which caught the sun. The result is in marked contrast to the rather gloomy, previous appearance of the office.

Lighting was also improved, the office being rewired to facilitate this. (Through continuous alteration and extension the system had become faulty and overloaded.) Strip lighting was positioned immediately over work-places, and not in the centre of rooms as previously.

When the architects were called in to advise in August, 1954, 53 people were employed. Since the completion of their plans in July, 1955, the figure has risen to about 70. There is no suggestion now, however, of overcrowding.

The new accommodation is "flex-

ible"—if any further alterations become necessary, they may be effected easily and quickly. The partitions, for instance, are not permanently fixed and can be taken down and re-erected elsewhere, to suit changes in office organization.

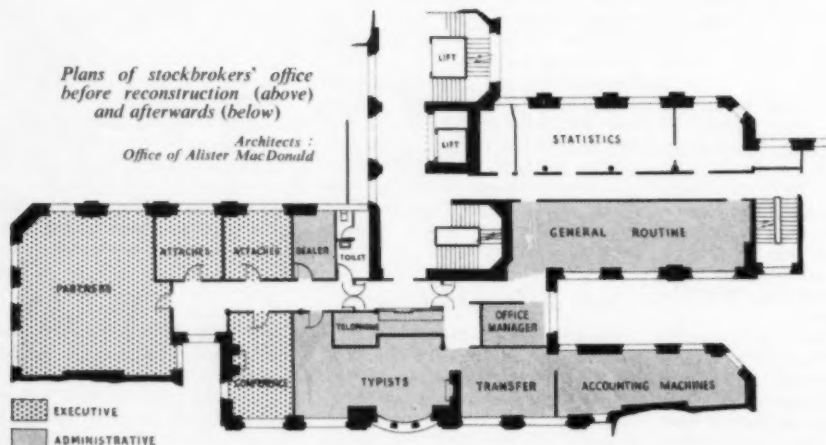
The area of the office is approximately 4,250 square feet. The cost of conversion was about £3,500, plus about £1,000 for new furniture and carpets. The cost was a little higher than it would have been if it had not been carried out in stages.

The new office was not intended to look spectacular in the way that a showroom might. The architects' object was simply to provide a more efficient office, without disturbing the firm's business and as cheaply as possible, consistent with good quality and appearance.



Plans of stockbrokers' office before reconstruction (above) and afterwards (below)

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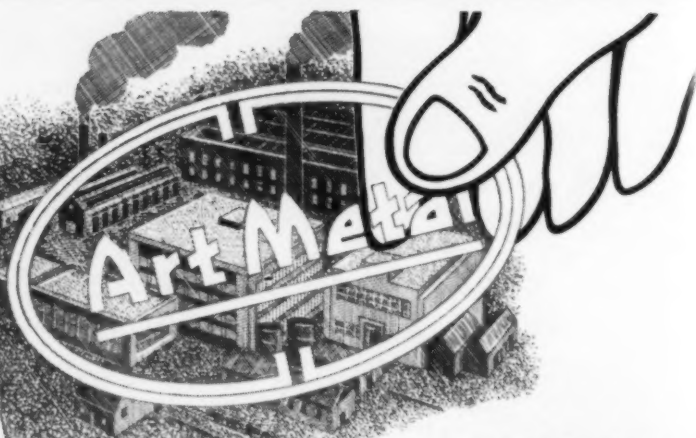
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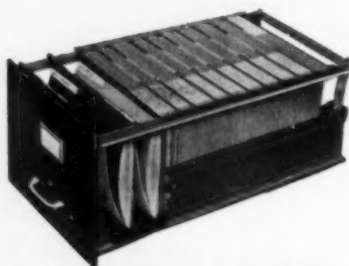
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Rapidly increasing trade threw such a heavy burden on the office organization of the Northern Publishing Office (Belfast) Ltd. that a serious hold-up in the despatch of orders was threatened. The company tackled the problem by installing a rotary dyeline copying machine which has cut down the time spent on preparing sets of documents relating to orders.

IN the expansion of their business, The Northern Publishing Office (Belfast) Ltd. found that the increased volume of trade was creating too much paper work for their office staff to control efficiently, causing delays in deliveries and invoicing, and the company decided that complete modernization of their office methods would be the only satisfactory answer.

The office problems of this firm were caused largely by the diverse nature of their business, which has undergone considerable change since it was established in 1880 as a retail book-sellers and stationers in one of Belfast's busiest thoroughfares. They branched into the wholesale trade at the turn of the century, adding the factoring of toys and fancy goods, and gradually extending their warehouse space as the range of products they handled became wider. Later, they began to manufacture sundry items of stationery, including envelopes, and printing was also started.

On the wholesale side they now deal with some 5,000 separate items, from razor blades to note books, which they supply to retailers and distributors throughout Northern Ireland.

How Order Copying Cleared a Delivery Bottleneck

By DAVID JOHNS

Documents relating to orders, involving separate writing operations, were the worst bottleneck in the office, and it appeared that if they could cut down the repetitive work in this section they could achieve a big saving in office time which would speed up the despatch of orders and invoicing. To overcome this problem they adopted a system employing a rotary dyeline copying machine which duplicates on sensitized paper information written on translucent master sheets.

Most of their orders are received via the firm's team of sales representatives,

who travel around Northern Ireland making regular calls on customers. Salesmen are provided with specially-prepared translucent sheets on which to take orders, and these sheets become the "masters" for use in the copying machine. Orders received direct from customers are typewritten in the office on the translucent sheets.

The sheets are designed to fulfil a number of functions after the salesman has noted the customer's order, and they contain space for information to be inserted at various stages of the order's progress through the office

Key Points in the System

1. Salesmen's order sheets become the "masters" from which copies are taken for use as delivery notes, advice notes, and invoices.
2. By using sensitized sheets of varying sizes the company ensure that only the desired amount of information is contained on the copies which go out to customers.
3. The original order sheets, from which extra copies can be made at any time, are retained by the firm as their record of individual transactions.

system. All entries are made in black ink to ensure maximum legibility.

At the top the salesman enters the customer's name, address and account number. In columns provided below he enters a description of the goods, the price rates, and the quantities required. There is a further column dealing with purchase tax, in which the salesman enters a code letter to signify the rate of tax payable on each item.

After initialling and dating the order, the salesman forwards it to the company office.

On being received at the office, the order goes first to the cashier, who passes it. It is then logged in an order book, at which stage an invoice number is entered on the order sheet. The stock control department receives the order sheet next.

Here, a check is kept upon orders by

means of visible records. Each item in the firm's stocks is represented in the records by a double-sided flap into which are fitted cards giving a description of the item, its location in the warehouses, the supplier, and other information regarding stocks. The flaps fit into flat pull-out trays which are housed in cabinets.

As orders for items are received, the quantity required is deducted from the amount in stock, thus giving an up-to-date figure of the firm's stock of any particular item. When stocks fall below a pre-determined level, fresh orders are placed with the suppliers. As each customer's order is noted, the records show the movement of stocks over any given period, thus providing a convenient guide to probable future demand.

The records staff check the items listed on the order sheet to see that they have sufficient in stock to meet the demand. If any item is out of stock, steps are taken to fill the gap with the least possible delay, and a note is written against the item on the order sheet to the effect that this item will be delivered in due course.

To signify that the order has been cleared through the stock control, the sheet is rubber-stamped in a space at

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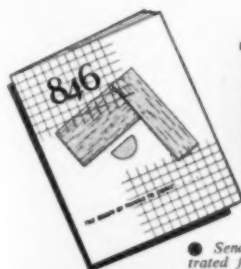
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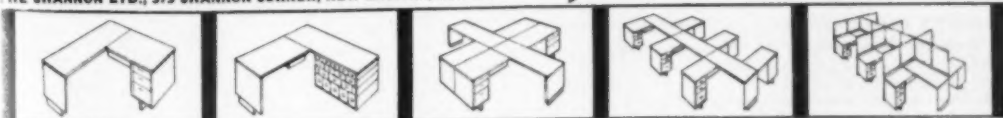


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the bottom before being passed on to the department concerned. When the goods have been got out and checked, the sheet accompanies them to the packing room. While they are being packed, the sheet is sent to the office where a delivery note—a dyeline copy of part of the order sheet—is made.

To obtain a copy of the original, a piece of sensitized paper is placed against it and the two are fed via a roller into the machine.

As they enter, a strong light is directed on to the translucent order sheet. Where the master sheet is blank, the light penetrates through to the sensitized paper and exposes it. Where the passage of the light is blocked by the writing on the master sheet the sensitized paper remains unexposed. The under sheet is then passed through a developing process, in which the unexposed areas emerge black against a white background. Thus a permanent and perfect copy of the original is speedily obtained.

It is not desirable that the order should be detained while the goods are being priced, so the copying machine operator selects a piece of sensitized paper measuring 6½ in. by 10 in. for use as a delivery note. The top and left-hand edges are located with those of

the order sheet, which measures 8½ in. by 13½ in., and the two are fed in this position into the machine. The resulting copy contains only the customer's name, address, invoice and account numbers' description of the goods, quantities, and details of packing and despatch. The customer then receives his goods quickly with a delivery note from which to check them.

On the original document the pricing of the items in the order is extended and totalled. Purchase tax, varying according to the class of each item, is worked out and added, and the total is adjusted in accordance with the terms of trade received by the customer. The invoice and copy invoices are then taken, as required, from the original.

Invoice Produced

When the order sheet has completed its round of the departments, and all information has been entered on it, it returns to the machine operator who then has to produce an invoice. This is printed from the order form on a sheet of sensitized paper measuring 8 in. by 10 in. which is located on the master sheet in the same way as for the delivery note.

Being wider, the invoice carries all the details of the delivery note, plus the prices and extension, tax payable, and total cost, all of which have been filled in on the order sheet since the delivery note was produced. The translucent master sheet is retained as the firm's own copy of the transaction.

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The copying machine is also used in the preparation of statements. The company use loose-leaf ledgers of translucent sheets on which details of the account are entered in the usual way with an accounting machine. The ledger sheet is then put through the copying machine with a piece of sensitized paper, and the resultant replica is sent off to the customer.

In all but one respect, the company have found that this copying system has had the desired effect of speeding up their office work. Their reservation is that when small orders are received, with perhaps just one or two items on the order sheet, it would probably be quicker to deal with them on continuous stationery. For no matter how full—or empty—the order sheet is, the same time must be taken in producing copies.

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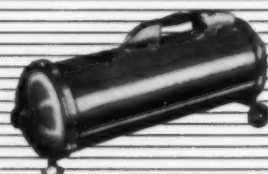
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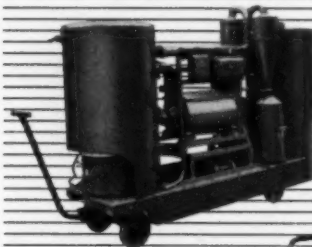
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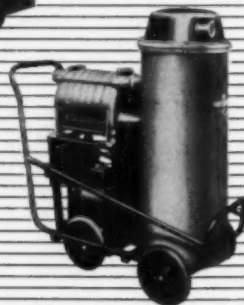
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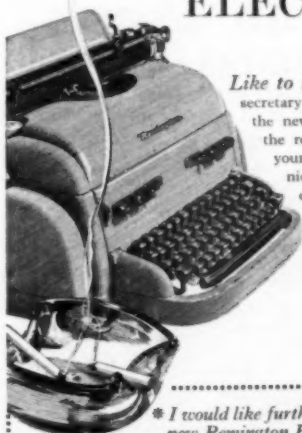
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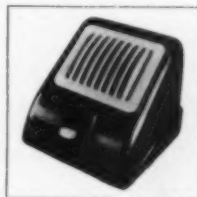
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BUSINESS



The Hugh Wood companies have grown considerably in the last decade. House-purchase loans to employees have had a marked effect on the stability of their labour force during the development period

Housing Scheme Helps to Hold Key Workers

By making interest-free loans, repayable over periods of up to 20 years, a Tyneside firm are helping more than 100 employees to buy their own homes. Aimed primarily at weekly- and monthly-paid men—although all employees are eligible for some form of assistance—their five-year-old plan has reduced considerably the rate of labour turnover.

MANY firms appreciate the value of helping "key" employees to obtain satisfactory living accommodation. Some buy or build houses for this purpose and let them at subsidized rents; others favour the less complicated practice of advancing money at a low rate of interest to employees who want to buy their own homes. Huwood Mining Machinery Ltd., Gateshead-on-Tyne, have embodied the second of these ideas in a scheme which reveals an unusually progressive outlook and possesses several distinctive features.

The scheme is in its fifth year, and about 130 office and factory workers have already benefited from it. This number represents one-tenth of the total labour force of the Huwood manufacturing business and their marketing organization, Hugh Wood and Co., Ltd.

One feature which raises the Huwood plan above the level of most company housing schemes is that all loans are interest-free. The amounts, moreover, are substantial. "Key" workers (and in this case the term covers all men who

are paid on a weekly or monthly basis) may borrow the full cost of houses which they themselves have chosen, plus legal charges if necessary. For hourly-paid employees, financial assistance is available on a more modest scale based on length of service.

Leaving aside its altruistic aspects, the scheme has had a marked effect on the stability of the company's personnel. In an area where there is particularly fierce competition for both

By PETER SPOONER

skilled and unskilled workers, Huwood enjoy a remarkably low rate of labour turnover. The wastage which does occur is largely restricted to casual workers of the type which "come and go" in any circumstances.

Huwood make an extensive range of underground mining equipment, from safety helmets to diesel locomotives, and are now developing the production of conveyer systems for use in other industries. They are a comparatively

young company, and much of their growth has taken place since the war. For this reason, the management have been particularly interested in methods of getting and keeping good workers.

The company's founder and managing director, 68-year-old Hugh Wood, is a man of vigorous and sometimes unorthodox views. A few months ago he "challenged the British coal industry" by offering a £5,000 prize to the first N.C.B. Area to develop a colliery with a certain output.

The housing scheme also exhibits a down-to-earth but "different" attitude towards the problems of increasing production and building good labour relations. Above all, it is inspired by businesslike motives. About five years ago, Huwood found that they were losing a few of their key workers to firms which offered accommodation in company-owned houses or made house-purchase loans in one form or another. The scheme was introduced primarily as a means of checking this drift.

At the same time, it reflects Mr. Wood's enthusiasm for the more practical forms of industrial welfare. He holds the view that a man's performance at work depends to a large extent on the happiness and stability of his home life.

A third motive lies in Mr. Wood's belief that wage-earners should be encouraged to *buy* houses, rather than to spend all their lives paying rent. In this respect, his attitude may be summarized by saying that house-ownership makes good citizens and (again the businesslike approach!) that good citizens make good employees.

Although these motives are inter-related, each is linked particularly with one of the three sections into which the housing scheme is now divided.

The original scheme (still the most important section) covers only weekly- and monthly-paid men. Its provisions are flexible. Any employee in this category who wants to buy a house can borrow a sum varying from £50 to the full purchase price plus legal charges. No top limit is specified, although naturally the company discourage people from taking on property which would absorb an over-large proportion of their income.

Repayments may be made over any period up to 20 years. If a man is buying partly-occupied property (*i.e.* flats) and is thus acquiring an additional income in the form of rent, the company suggest that he should repay the loan in less than the maximum period. But here, as in a number of other respects, the man is free to choose

arrangements which suit his own circumstances.

The company act in much the same way as a building society. Second-hand property is surveyed and valued before a loan is made. In every case a straightforward mortgage agreement is drawn up, incorporating the usual stipulations about fire insurance, repairs and maintenance, and repayments. The scheme is self-financed, and all deeds are held by the company.

In addition to the fact that no interest is charged, the agreement contains one clause which distinguishes it from the orthodox type of mortgage. If for any reason the employee leaves the company, he is expected to repay the balance of his loan immediately.

Although some applicants are rather perturbed when this clause is drawn to their attention, its effect is by no means as "sinister" as they imagine. The company point out that any member of the scheme who ceases to work for them can choose one of two entirely satisfactory courses of action. First, he can cover his outstanding loan by selling the property; second, he can obtain a new loan from a building society. In either case, the employee benefits by virtue of the fact that no interest has been charged on the sum which he has already repaid.

After the main scheme had been running on these lines for some time, the management realized that a serious burden would be thrown on the widow if a borrower died before his loan was repaid and the mortgage were automatically foreclosed. For this reason they recently introduced a supplementary insurance scheme under which the company takes out a policy on the life of each borrower, covering the outstanding amount of his loan.

A substantial portion of the premium is paid by the company. The employee's contribution decreases periodically as his loan is reduced. For example, a man who owes between £1,500 and £2,000 pays an additional 2s. a week, and this sum is adjusted at the rate of sixpence for each £500.

The life insurance scheme is now compulsory. In this way the company obtain concessions of the type associated with group pension schemes where there is 100 per cent membership. All borrowers qualify for premiums at a fixed rate, irrespective of their state of health when they join the scheme, and medical examinations are not required.

The reasons for restricting this section of the housing scheme to key employees are fairly obvious. Had the same offer been made to hourly-



The company's welfare programme is composed of wholly practical measures. One of them is a daily dental service—which cuts absenteeism

paid workers as well, the response might have been embarrassingly large. Moreover, there might have been some difficulty in recovering the money if a borrower's wages ceased on account of sickness. As it is, all repayments and insurance contributions are made in the form of wage or salary deductions.

Nevertheless, the company dislike the idea of placing too much emphasis on the distinction between staff and rank-and-file employees. They also believe that all workers should be given some assistance in this direction.

The problem was resolved about two years ago by introducing a subsidiary housing scheme in which everyone has a chance to participate.

Based on Service

Any hourly-paid worker who wants to buy a house can obtain an interest-free loan at the rate of £5 for each complete year of service. Such loans—repayable after 20 years—seldom exceed £50, but provide a useful contribution towards the deposit on a house; and it is this, after all, which often baulks would-be-purchasers.

The £5-a-year scheme is retrospective: an hourly-paid worker who is already buying a house can still obtain an interest-free loan on the same terms. In this way, he can decrease the size of his mortgage and either pay it off more quickly or reduce his existing repayments. The company make sure, however, that such loans are used only for the purpose for which they are made. When a new purchaser is involved, the money is sent to the solicitors who are handling the conveyance; in the case of "retrospective" loans, it goes to the employee's building society.

Under the third section of the Huwood housing scheme, employees

who want to buy the pre-war council house in which they live can obtain a 100 per cent advance from the company—if they can persuade their local authority to sell the house at its original cost price.

This offer, which reflects Mr. Wood's personal attitude towards the controversial question of private- versus council-ownership, was made a few months ago. As a safety measure, it was restricted provisionally to one employee in each of the 20-odd administrative areas from which the company's labour is drawn. At present, however, only two men have applied, and in neither case is the local authority prepared to sell.

What of the response to the other offers? One hundred men—about one in every three eligible employees—have obtained loans under the main scheme. A few of these loans have been repaid already, either because only small sums were involved or because the men concerned have left the company; but 88 of them are still outstanding. The company have found that most applications from employees in this category are for 100 per cent advances, and that the average price of the property is between £1,500 and £2,000. A fairly large number want to cover legal expenses as well.

The £5-a-year scheme has attracted fewer applicants. This is largely due to the mixed feelings with which many industrial workers regard the prospects of house-ownership. And, of course, some employees who are actually buying houses are discouraged from seeking a loan because they dislike the idea of having to repay it if they decide to leave the company. Huwood believe, however, that this section of the scheme has a positive value, especially as it helps to offset any impression that the company are interested only in the well-being of a "privileged" group of workers. So far, about 30 workers have used these loans as a means of paying the deposit on a loan or reducing the size of an existing mortgage. Apart from the opportunity to put down a deposit on a house, employees who accept company loans are getting, in effect, a series of small bonuses—the amounts which they would have paid in interest if they borrowed the money from another source.

This is not the sort of company in which people are impressed by top-heavy administrative systems. Their labour relations depend to a large extent on informal methods of com-

Continued on page 143

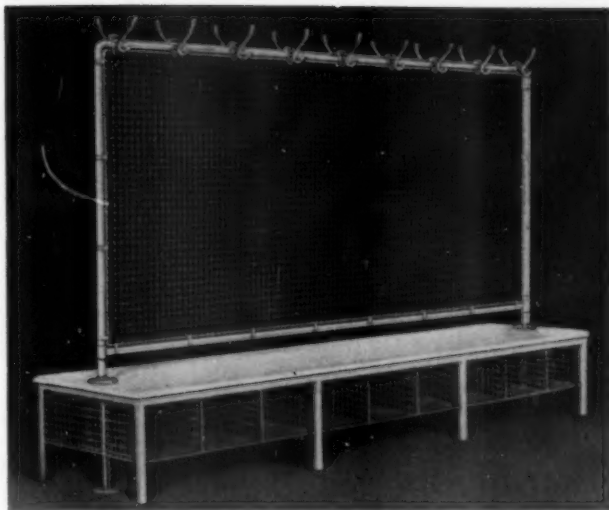


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Policy Column

Bigger Burden on the Budget

THE Autumn Budget has placed a further burden on the industrial canteen. Purchase tax on most goods has been increased by 20 per cent, and such articles as kitchenware and tableware, which formerly escaped, are now taxed at 30 per cent.

The canteen manager who is struggling to balance his expenditure and income may well laugh at the cost of biscuit barrels, decanters and wine glasses—unless he is equipping a directors' dining room. But cups, saucers, plates, cake-tins, saucepans, frying pans, teapots, and dustbins figure regularly in his overheads, and tax increases here will send up the annual deficit.

Some caterers estimate that their replacement costs will go up by 5 per cent. Others say that the works canteen, with its breakages and losses of tableware, will suffer even more than commercial establishments.

But, higher tax or no, it is still false economy to scrimp on canteen equipment. It should not be forgotten that pennies saved here will cost shillings in wages and also in wasted or spoiled food.

Tea does not keep hot in a faulty thermal urn. Fuel is wasted when water boilers are furred-up or saucepans are thickly covered with burned deposits. It takes twice as long to slice meat with a blunt knife or a worn-out slicer, and the meat will not go as far. And short supplies of crockery make washing-up a sporadic hit-or-miss process which is costly in labour, hot water, and detergents.

The harassed canteen manager caught between low charges and high food costs, high fuel costs, high wage costs, and now mounting replacement costs, will put himself in an invidious position if he economizes on equipment to the degree where his penny wisdom becomes pound foolishness.

But the New Year is a good time to take stock of small and large equipment: to ensure that it is sufficient in quantity and in good working order; and to work out a minimum level for all loose items below which it is bad policy to fall.

Nine Steps in Forming a Canteen Policy

By WINIFRED McCULLOUGH

Senior Canteens Adviser, Industrial Welfare Society

To be run efficiently, a canteen must have a definite policy—the yardstick by which it is possible to determine whether a canteen is fulfilling its function. In this article, the author examines the points which must be established when formulating a policy, and thus provides a means of checking the effectiveness of existing canteen services.

A CANTEEN must have a well-devised, clearly-formulated, and widely-promulgated policy. Otherwise the result will be chaos. The manager who is not sure what is expected never knows what must be achieved.

It is not a case of subsidy alone. A policy is a matter of setting standards high enough to fulfil the requirements of management and customers, yet low enough to be compatible with the price of meals—whether this is determined by cash takings alone, or by takings plus subsidy.

There are nine points to be considered when formulating a canteen policy:

Type of Meals. Ideas on this point vary tremendously. One firm may insist on solid four-course mid-shift meals of a really high quality. With this attitude usually goes a definite policy of serving fresh vegetables and fruits; to eschew the cheaper "filling" types of foods and to obtain maximum variety.

Another firm say "simple and solid." In their canteen you will see vast portions of traditional English working-class food—hot, savoury, and expensive to produce.

A third may employ many women, and pin their faith to comparatively small portions of as wide a variety of foods as the manager can produce.

All these policies have their bearing on costs. If you serve 200 dinners and offer six choices, your food costs will be higher than if you were to offer three choices.

So there is the first point. What is the policy about food? Has it ever been expressed?

Meal Breaks. In many canteens the times of meal breaks were established during the war, and have never been altered. Here, the question to ask is: do they still suit present working conditions? Are they the best that can be arranged for the efficiency of the factory and for the convenience and economical running of the canteen?

Where the "everyone eats at 12.30" rule operates because that way is best for production, so it must remain. But often, an examination of meal times reveals practices that have just "crept in."

Tea Breaks. When and where should tea-breaks be taken? It is worth making a high-level decision on this point. For 500 people wasting five minutes every morning and afternoon over and above the official 10-minute break will cost their employers a million and a quarter working minutes in a year.

Some firms send tea round the works on trolleys; others establish tea kiosks at strategic points.

The modern view seems to be that it is better for 10 canteen assistants to devote two hours daily to providing refreshments than for 500 production workers to spend 10 minutes daily in tea queues. But this decision can wreck the whole financial framework of the canteen unless it is made a matter of policy and the proper allowances are made.

Service. One of the most vexed questions in the canteen world at present seems to be: Should office workers have waitress service? This is just one of the policy considerations on how food should be served in a particular factory.

To check up on the service policy the following questions might be answered:

- 1—Does everyone get the sort of service the firm is proud to offer?
- 2—Is the service quick enough?
- 3—Does it provide privacy for people who would normally talk shop at lunch time?
- 4—Is it as clean, efficient, and pleasant as possible?
- 5—Is it up-to-date?

Control. An important point of policy is, of course, deciding how the canteen will be run. There are a number of alternative ways. It can be done:

- 1—By the firm's own manager, responsible to the personnel department, and perhaps assisted by the advice—or criticism—of an elected committee.
- 2—By the firm's own manager who is responsible to the works manager, managing director, or some other top executive.
- 3—By an autonomous committee elected for a period who form themselves into a luncheon club, taking over full responsibility,

financial and otherwise, and appointing their own manager.

4—By an outside contractor who pays all bills and wages, and either works to an agreed subsidy or is reimbursed for losses.

5—By a manager appointed by the firm and advised and supervised by an outside consultant who charges a fixed management fee.

In practice, about 30 per cent of all industrial canteens are run by contractors, and upwards of 65 per cent by firms themselves. The percentage run by management committees is very small indeed.

Prices. About 50 per cent of all canteens operate on a fixed price basis. A tariff is displayed and the manager may not increase or decrease prices without confirmation from his superiors—perhaps an executive or a canteen committee.

In the other 50 per cent, prices are elastic, and the manager can vary them according to season, market prices, and his own success—or failure—in buying.

The level of prices reflects the cost of raw materials, plus wages, fuel, cleaning materials, light replacements, laundry and other miscellaneous overheads, less the value of the fixed subsidy.

Clearly, the flexible price is the more reasonable policy, as long as safeguards ensure that some low-price meals are served for those who want them. When prices rise with the cost of commodities or fall with seasonal price reductions, fluctuations are accepted far more placidly than would be the most minute change in the fixed-price menu.

The Manager. Choosing the type of canteen manager to be employed is a matter of the utmost importance. When a manager is required, the firm should leave no doubt as to the salary range offered, and the qualifications, experience and character traits desired.

A point to remember: A canteen is as good as its policy, its manager, and its premises—in that order. To economize on the manager's salary is, in most cases, to say goodbye to chances of successful operation.

Staff. The number of staff required varies, not only according to size, but also with conditions of work and the type of service provided. Generally, however, a team of four should be able to fulfil the needs of 100 dinner customers, and about 300 snack and beverage customers. This team should suffice for food preparation, cooking, and cleaning. It will not, however,

stretch to cover waitress service for executives, tea station service in distant workshops, or a specially varied or elaborate menu.

For the most part, there is little choice in employing general canteen hands. The washer-up, potato-peeler and general cleaner is neither easy to find nor to keep. About all one can demand is that they should be between 18 and 60, scrupulously clean in appearance, healthy, and have good character references. It is, however, a mistake to take on obviously unsuitable hands even in a quite unskilled capacity.

All canteen staff should be medically examined. Apparently healthy people may carry germs likely to cause great discomfort and illness to many if they come into contact with food. One large organization medically examines all candidates and rejects on the following grounds: any chronic skin lesion, tuberculosis (even a healed case may be affected by the heavy nature of canteen work), active varicose veins, notably defective eyesight, bad teeth, any intestinal infection, or any past typhoid or gastro-enteritis. Those who come under the description of "chronic unwashed" are also barred!

The Subsidy. On the whole, a subsidy will be necessary if 1s. 6d. or less is to be charged for a main meal of meat or fish with two vegetables. Sandwiches (meat) will also have to be subsidised if they are to sell at under 10d. Tea has a food cost of just under 1d. for an 8oz. cup and has negligible labour cost. But tea pushed round the works on a trolley involves much waste and high labour costs.

In deciding on the degree of subsidization, difficult premises, shift meals, night meals, waitress service, and the level of wages paid to canteen staff must all be taken into consideration.

A good subsidy policy allows for fluctuations in the cost of materials, wages, and in the demands made upon the canteen. It may be gross or net; it may be expressed as a percentage of the wage bill, as an allowance on each meal served, or as an agreed sum per employee per year.

A study of 50 London firms shows 20 with a canteen subsidy of less than £2.10s. per employee per year; 15 with between £2.10s. and £3; eight with £3 to £4.10s.; four with between £5 and £6; one with £8; one with £12; and one with £16.10s.

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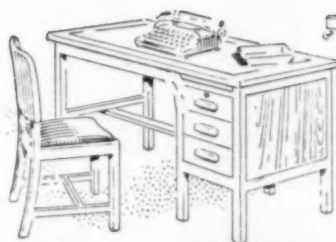
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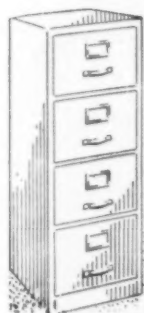
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Enquiry Ref. No. O.1/1

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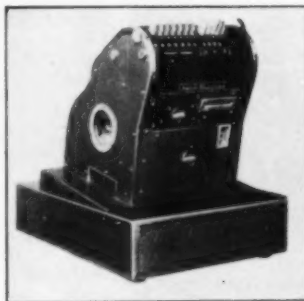
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Prints and issues tickets

and turns a handle. Also printed on each ticket, and on the audit roll, is a five-digit consecutive number, an operator's code letter, a machine number and the date.

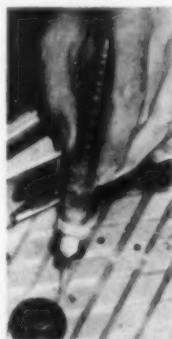
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Press to lubricate

industrial articles. Like other Poppets, the pen is operated by pressing the point on to the surface until the required amount of oil has been extracted.

Refills can be obtained as required.

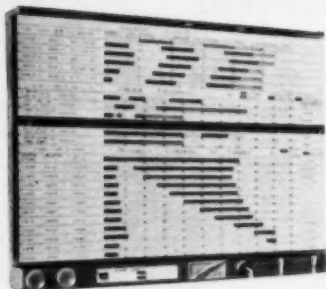
Enquiry Ref. No. O.1/4

"Slide-Rule" Wall Chart

ONE of the newest and most versatile wall charting systems is described by its makers as "the chart with slide-rule action." Basically, it consists of a number of self-supporting bar-units which fit one above the other into an aluminium panel. The

★ Equipment included in this survey is selected for its news value alone. The names and addresses of the manufacturers or distributors of items mentioned can be obtained by writing to the Editor, BUSINESS, Mercury House, 109-119 Waterloo Road, London, S.E.1, quoting the appropriate reference numbers. Manufacturers are invited to submit details of new and interesting products for consideration. An original photograph should accompany each item submitted.

Business EQUIPMENT SURVEY



Adjustable strips

front of each bar forms a transparent plastic "window." Through this can be seen two cards, one at the left end and one at the right end. On the cards are typed (or handwritten) the required data. Between them is a printed scale and, immediately beneath the scale, a number of coloured plastic strips which form the compound coloured bar of the chart. These strips can be easily adjusted by small knobs which only become visible when the bars are removed from the panel.

When fully assembled, the chart contains 26 working bar-units plus

one master scale, or "tinting bar." The unit is completely self-contained, and measures only 20½ in. wide by 16½ in. high.

Enquiry Ref. No. O.1/5

Attractive Notice-boards

IN a new extensive range of interchangeable notice-boards for offices, factories and showrooms which has recently come on the market, the letters and figures are made of moulded

plastic, and are fixed on the board by means of special penetrating points, which hold firmly in the slotted felt backboard.

A wide range of founts is available in either ¼ in. or 1 in. sizes, and in a variety of colours—red, white, blue, yellow, black, green and brown.

The frame of the board is made to the customer's specification. It can be supplied either with an open front or with a glass cover. The felt backgrounds are available in a range of colours, including black, maroon and grey.

Enquiry Ref. No. O.1/6



Quick-change board

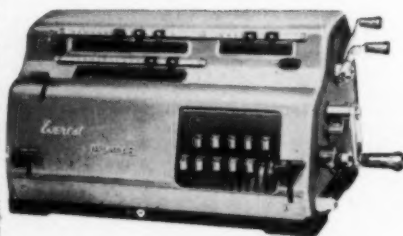
Long-lasting Floors

GLOCRETE SR is a new synthetic Grubber solution, the main use of which is to provide a permanent protective coating for all types of floor surfaces, including concrete, brick, stone, metal, linoleum and wood.

It is applied by normal painting methods and is fast-drying—light traffic can be resumed ten hours, and heavy traffic 48 hours, after application. So by applying the material at night or weekends, no interference with normal work is necessary.

Once it has dried, the material forms a hard, durable film. After a week,

it all adds up
to an
Everest
calculator



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(OFFICE EQUIPMENT) LTD.

30 NEW BRIDGE STREET,
LONDON, E.C. 4.

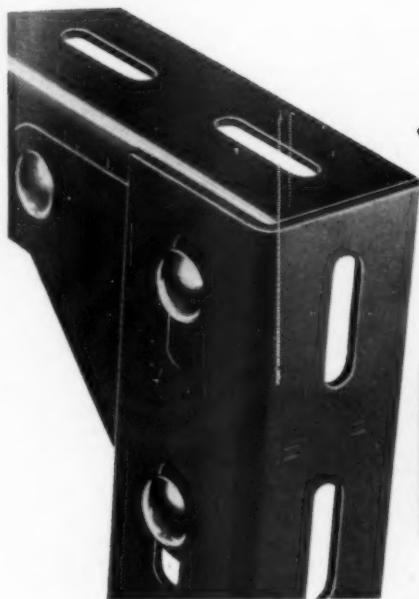
Telephone: CITY 1107

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- ★ Tens transmission throughout.



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**IT'S
SIMPLE**

**IT'S
VERSATILE**

**IT'S
HANDY ANGLE**

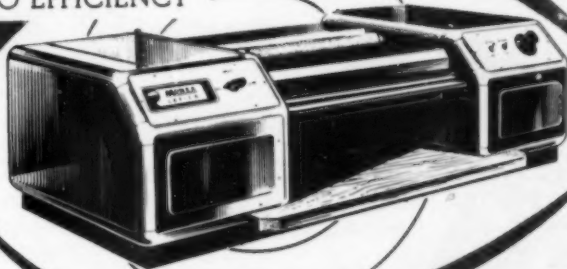
THE SLOTTED ANGLE WITH THE SATIN-BRONZE FINISH

HANDY ANGLE MANUFACTURING COMPANY
GRAND BUILDINGS, TRAFALGAR SQUARE, LONDON, W.C.2
 Tel: Trafalgar 2551

Works: Brierly Hill, Staffs.

*Please send for
brochure ref HA/356*

WITH AN EYE TO EFFICIENCY



Monex C2

Efficiency in any organisation starts with—**SPEEDY—ACCURATE DOCUMENTATION.**
 Whether it be a factory or a finance house information must be distributed rapidly—it must be accurate without unnecessary cross-checking.
 The dyeline process and the **MONEX C.2.** satisfies these requirements by working direct from a hand or typewritten manuscript.
 Every copy is equal in quality, sharp, clear, legible and the number of copies obtained from each original is unlimited.
 We have a fully qualified staff to discuss any application of the **MONEX C.2** to office systems.
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LAWES RABJOHNS LTD. Abbey House, Victoria St. Westminster, London, S.W.1. Telephone: Abbey 1542

Business EQUIPMENT SURVEY

it reaches about 85 per cent of the hardness of plate glass. Among its other properties are excellent resistance to abrasion, water and chemicals.

Enquiry Ref. No. O.1/7

Office Copying

IN response to requests received following last month's article on office copying, we publish here details of three up-to-date copying machines suitable for use in small and medium-sized offices.

First is the *Polycopy*, a spirit

duplicator designed primarily for short-run work. Up to 300 copies can be obtained from each master sheet, and the machine also provides for the economic reproduction of bills, instruction sheets, invoices, etc. It accommodates both quarto and foolscap paper, and reproduces multi-

coloured sheets quickly and efficiently.

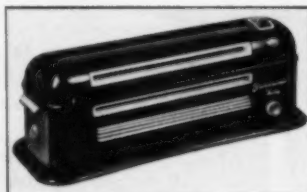
The second machine, the *Bandavelop Twin*, gives a perfect black-on-white photocopy of any office document in less than a minute. All types of copies can be produced—single-sided, double-sided, transparent, etc.—up to 14in. wide and of any length. The machine is extremely simple to use as it exposes, develops and prints in just two operations.

Finally, there is the *Copyfix*, a compactly-built unit photo-copier, which is small enough to fit neatly on a table or desk. Single or double-sided copies can be produced in less than 60 seconds, and annotations, alterations and signatures in particular are strongly reproduced. The *Copyfix* is extremely simple to operate, and requires no darkroom, rinsing or washing apparatus.

The picture (left) shows the machine producing an extract from a book, the main point about this being that it is not necessary first to remove the page. This facility, of course, offers great scope to firms wishing to produce a quick brochure.

The same firm also make the *Secretary*, a smaller machine designed to take the "overload" from other larger models.

Enquiry Ref. No. O.1/8



Left: The *Copyfix*
Above: The *Bandavelop Twin*
Below: The *Polycopy*



HOW ARE YOUR BUSINESS NERVES TO-DAY?



You want important papers... vital information... a sample from laboratory or stores. How long does it take the nerve system of your business to react? How quickly do your requirements reach your desk and how much does it cost to get them there? Remember, your business organisation is just as strong as the link between its various sections. On the smooth flow of paper-work and materials its prosperity and progress depend. Lamson Carrier Tubes and Conveying systems provide the vital line of communications which enable your whole organisation to function at peak efficiency all the time. Why not consult Lamson (Dept. D.1) now?

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PAYING FOR TIME

Time, directly or indirectly, is cost. If records of occupied time are not accurately kept the Firm concerned may well be

paying for time it does not get. The systematic analysis of working time is a first step to increased production and lower costs.

The GLEDHILL-BROOK Time Recorder controls the use of time; it provides an indisputable record of attendance, time on a job, overtime and other figures essential to accurate costing and the economic employment of labour.

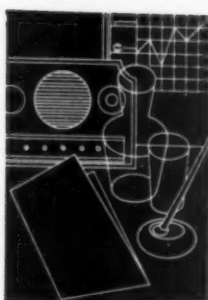
GLEDHILL-BROOK

Write for full details and illustrated leaflet to:

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38 EMPIRE WORKS

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Time, in terms of finding an executive quickly, is precious. Rediffusion Staff Location saves it.

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Enquire how Rediffusion can save time and help to solve labour and production problems in your factory. This entails no obligation, just as its installation entails no capital outlay.

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See-

HOW THE SCENE CHANGES

Garage with conventional lighting. Note the confusion of beams, pipes, trunking, wiring and light fittings.

The same garage after modernising with a LUMENATED CEILING.



Write for your copy of "LUMENATED CEILINGS", an illustrated brochure giving full details of this new lighting technique.

When modernising old premises or building new ones, you can make lighting an integral part of design by installing a LUMENATED CEILING, a new lighting technique combining light source and ceiling in one. The whole interior of shops, offices and show-rooms is diffused with a pleasant, efficient light of uniform intensity without shadow, glare or 'high spots'. The LUMENATED CEILING overcomes many design problems

by effectively screening overhead pipe work, ventilation trunking and other unsightly projections.

SAVING IN MAINTENANCE COSTS

The surface of the LUMENATED CEILING is a durable, finely corrugated plastic material, specially treated to repel dust. It is non-inflammable, can be easily cleaned and kept in perfect condition with the minimum of attention.

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HEAD OFFICE: THERMOTANK LTD., HELEN STREET, GLASGOW

SOUTH AFRICAN CO.: THERMOTANK S.A. (Pty.) LTD., SIMMONDS & GODFREY ST., JOHANNESBURG



TGA L7

BUSINESS

Business EQUIPMENT SURVEY

INDUSTRIAL EQUIPMENT

MATERIALS HANDLING

New Mobile Crane

A NEW 3-ton crane, the *KL33*, is a fully slewing machine capable of taking rated loads without the use of outriggers. Diesel-powered, it employs the direct mechanical drive which enables full engine power to be applied to each motion. It is built on the unit-construction principle, so servicing is simplified considerably.

A comprehensive range of alternative jibs and chassis types is available, together with many types of optional equipment; these give the *KL33* a wide range of applications. The jibs include channel and lattice construction types, while special types, such as swan-necks, can be supplied. One of the most interesting is a cantilever jib, designed to allow efficient working in confined spaces and indoors. It is raised or lowered smoothly by an hydraulic ram.

The wheeled-chassis is available with direct drive; with two-wheel differential drive (including a locking

interfere with the speed of normal working.

The crane can be driven over long distances as the travelling mechanism takes the full power of the engine. Gradients up to one in five (in extreme conditions) can be negotiated with the crane travelling light. A full range of safety features are incorporated.

Enquiry Ref. No. F.1/1

For Confined Spaces

ONLY 24in. wide and 60in. long (excluding forks), a new battery-powered fork lift truck can handle loads in extremely confined space and manoeuvre them round narrow intersecting gangways. It should be particularly useful where a block storage system is employed.

Control and steering is by means of a "deadman" tiller arm. Since the power unit can be rotated through 360 deg., ride-on or pedestrian control may be used.

Lifting and tilting is effected hydraulically, the lifting capacity being 1,000lb. at 18in. load centre to a height of 10ft., or 2,000lb. at 18in. load centre to a height of 7ft. 6in. Masts are telescopic, and 2deg. forwards and 10deg. backwards tilts are provided. Fixed masts can be provided if required.

Standard forks are 4in. wide and adjustable. Special forks are available, to customers' specifications—an important point where awkwardly-shaped goods are to be handled.

Transmission from a 24v. constant-speed motor is through a heavy-duty single-plate clutch and a gearbox with

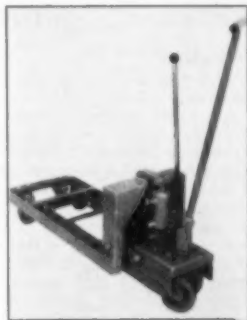
three forward and one reverse speed. A separate motor operates the hydraulic system.

The simplicity of the truck's design and the accessibility of its components ensures that maintenance can be carried out by the operator himself.

Enquiry Ref. No. F.1/2

Improved Lifting Truck

WITH a capacity of one ton, a new version of the *Code 675* lifting truck has a lifting frame 36in. long and 18in. wide. Chief improvements are the reduction of effort needed to



Lifts in confined gangways

operate the hydraulic pump, and the rounding of the lift frame corners, which facilitates entry into a stillage.

The pump handle is separate from the towing handle, thus enabling the truck to be lifted in confined gangways, and the pump itself is easily removable for servicing. The truck can be fitted with either iron or rubber-tired wheels.

Enquiry Ref. No. F.1/3



Small turning circle

device to give direct drive when required on soft ground; with four-wheel differential drive; and with two-wheel differential drive with axle lock and four-wheel steering. This last arrangement, fitted to a standard mobile crane chassis for the first time, combines manoeuvrability of caster-steering with the stability of a conventional four-wheel chassis, and enables the crane to turn in a 26ft. diameter circle.

The power unit is a two-cylinder air-cooled diesel, with a fuel consumption of about 2½ gallons per eight-hour day. The crane is simple to drive, the controls resembling those of a road vehicle. The operating controls have an inching device; at a recent demonstration the lid of a cigarette box was closed, using a 3-ton weight. This facility does not



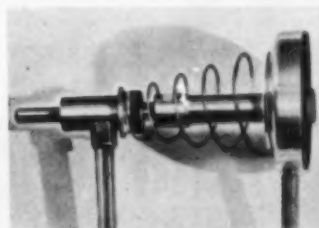
Ride-on or pedestrian control

PORTABLE POWER TOOLS

Drilling Hard Surfaces

THE *Diatube* range of drilling equipment is for drilling clean, accurate holes in hard materials such as wall tiles, flint bricks, concrete, granite, quartz, fired porcelain and marble.

Main components are a diamond-



Spring-loaded cup directs coolant

Business EQUIPMENT SURVEY

tipped tube drill; a water swivel which ensures that the coolant supply removes the cuttings; an adaptor to connect these two units where necessary; and various auxiliary units for use under specific conditions. One of these accessories consists of a spring-loaded cup intended to direct the flow of waste water while drilling vertical faces.

The assembly is for use with portable or stationary power drills equipped with standard $\frac{1}{2}$ -in. Chucks.

Enquiry Ref. No. F.1/4

ELECTRICAL SUPPLY

New Relay

A NEW general-purpose relay measures only $3\frac{1}{2}$ in. by $1\frac{1}{4}$ in. by $2\frac{1}{2}$ in., but has contactor performance—the contacts having a continuous rating of 20amps. at 250v. A.C. A two-pole changeover contact arrangement is used, which meets a great many needs, including nearly all single-phase mains switching.

The coil consumption is below 5A on A.C. and $2\frac{1}{2}$ watts on D.C., thus allowing operation over contact thermometers, etc. The frame is fully laminated, and the construction gives rapid operation on both A.C. and



Contactor performance

D.C., with inherent silence when operated on A.C.

Other features include screw terminals with Nyloc nuts and cable clamping washers; replaceable contacts, and a stainless steel armature shaft in self-lubricating bearings, to allow rapid operations over long periods.

The relay is also available in a weatherproof cast aluminium box, measuring 7in. by $3\frac{1}{8}$ in. by $3\frac{1}{2}$ in. A

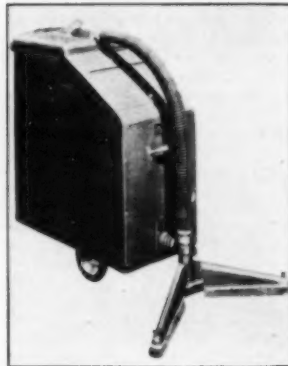
$\frac{1}{2}$ -in. conduit entry is provided top and bottom, and there is a channel for through cables behind the relay.

Enquiry Ref. No. F.1/5

MAINTENANCE

New Cleaner Attachment

MANUFACTURERS of the Chevron floorsweeper claim that it overcomes what they regard as a



For sweeping gangways

Are you RIGHT ON TIME?

... OR do your "5-minute-men" boost your costs?



Each employee 5 minutes late costs you up to $3\frac{1}{2}$ d. daily. In a year, that means over £177 for every 50 on the payroll.

A MAGNETA Time Recorder costs less than half this and will pay for itself in 6 months.

"RIGHT ON TIME" means MAGNETA Time.



MAGNETA TIME RECORDER

"Keep an eye on Costs"

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Now all under one roof

NATIONAL PLASTICS CONSOLIDATION COMPLETE

In order to increase still further the efficiency and productive capacity of our plant, we have now completed the consolidation of our plastics interests under one roof at Walthamstow.

The reorganisation of the different sections of our business into Divisions, the purchase and installation of more plant and the provision of more factory space have had the desired effect.

A plant which for many years has been one of the largest in Europe devoted exclusively to plastics production is now larger still. Manufacturers needing larger quantities of finished plastics goods are invited to visit Avenue Works to inspect the plant and its ancillary services. They cannot fail to be impressed by an organisation which, to take only one example of current orders, supplies mouldings for two of Great Britain's most popular motor cars with unfailing regularity. A plant in fact which can supply plastics mouldings on a scale to satisfy the largest industrial enterprises.



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PLASTICS**

NATIONAL PLASTICS (SALES) LTD. Sales Organisation for **BRITISH MOULDED PLASTICS LTD.**, Avenue Works, Walthamstow Avenue, London, E.4. LARKSWOOD 2323



**NATIONAL PLASTICS
MAKE ...**

**Compression
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**... from all available
plastics materials**



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the Size
or Shape. . .**

**there's a
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ENVELOPE
to fit**

When it's a question of finding the right envelope, no matter what the size, remember the name Wesley. We supply envelopes of every possible shape (if it's not in stock - we'll make it) - printing and die-stamping when and where you need it.

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**The NEW
'SQUARE DEAL'
in Lockers**



INTERLOCKER

(Patent applied for 13611/54).

Rigidly interlocking by patented device these sturdy steel cube lockers offer endless possibilities for space saving.

Stove-enamelled in choice of attractive colours. Firmly closing door, fitted with either chromium plated finger pull and ball catch or English 6 lever lock. Extra parts provide for coat hanging and seating.

A 6in. stand permits use of lockers over steam pipe for airing. Made in two sizes—12in. or 15in.

★ Showing various arrangements that can be achieved by INTERLOCKER.



**W.B. BAWN
& COMPANY LIMITED**

BLACKHORSE LANE, LONDON, E.17
Telephone: LARKSWOOD 4411-4

Business EQUIPMENT SURVEY

big weakness in industrial vacuum cleaners. The new unit is an attachment for coupling to their model RM22 machine for large-area and gangway sweeping. Dust and dirt can be removed without interfering with production; an adjustable slide allows the removal of factory debris without raising dust.

The attachment is made in standard widths of 18, 24 and 30in. For extra-large areas there is a 50-in. wide attachment for use with the same maker's RM44 twin.

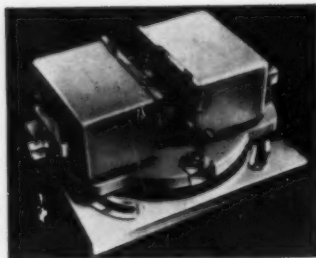
Enquiry Ref. No. F.1/6

BENCH TOOLS

"Down-grip" Machine Vice

THE *Dormer* machine vice is designed to ensure that a workpiece is gripped positively without any possibility of upward lift. Similar in appearance to a conventional vice (and used in the same way) the *Dormer* combines rapid adjustment for work-size with a lever-mechanism which ensures that the jaws remain square with each other and with the base at all times. They exert a downwards pull as the work is gripped.

Dimensions of the vice are: maximum opening of jaws, 4in., width of jaws, 6in., depth of jaws: 1½in.,



Positive gripping

height from base to top of jaws, 5½in. The body of the vice is swivel-mounted on the base, and can be rotated through 360 deg., a scale graduated from 0 to 360 deg. being provided for setting purposes. The standard jaws are held in place by socket-head screws, and are reversible to allow shallow V-grooves on the back to be brought to the front for gripping rough work, which normally would tilt when gripped. It also preserves the datum faces for accurate work. Soft jaws can be supplied if required.

One of the jaws of the vice is used solely for exerting the gripping force through the medium of a screw and hand-lever. The other jaw is adjustable

by means of two thumb-triggers to enable it to be set to the work-size. The jaws are mounted on a steel slide, and are fitted with resilient wearing plates, which are renewable.

Enquiry Ref. No. F.1/7

GENERAL

Safer Ladders

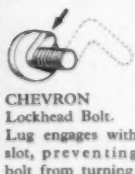
THE dangers connected with climbing ladders can be lessened by the use of the new *Fixfoot* adaptor. This simple but effective device gives a



Will not slip



Identical Slots in
BOTH FLANGES
ensure
100% ADJUSTABILITY



CHEVRON Lockhead Bolt. Lug engages with slot, preventing bolt from turning.

The Slotted Angle Bar
with
NO LIMITATIONS!

Wherever you cut it, whichever flange you use, Chevron Slotted Angle can always be bolted in the exact position desired.

And there is **no wastage**; there are always bolt holes, enabling the smallest offcuts to be joined together. Chevron represents **THE ULTIMATE DEVELOPMENT of SLOTTED ANGLE**

It is a complete system, with unique features which render it indispensable to every factory, office, warehouse and garage in the land.

Ask for further information today.

Please ask for Booklet 'G'
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STRUCTURAL
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CHEVRON
Registered Trade Mark
WORLD PATENTS PENDING

more stable base for ladders—the makers claim that it is perfectly safe, even on greasy floors.

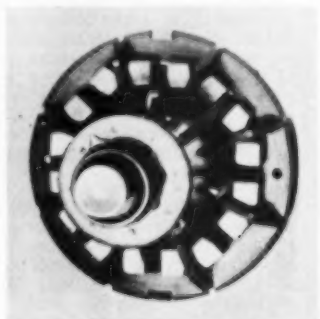
The adaptor is easily attached, and the reversible ends (point and ferrule) make it suitable for use on any flat, hard-surfaced floor. It conforms with the Factories Acts.

Enquiry Ref. No. F.1/8

New Security Switch

ALTHOUGH the *Allo* security switch is primarily intended for use on cars, lorries and other vehicles, it has many other applications—preventing the unauthorized use of machinery, for example. It can be incorporated in locks for safes or, with a little adaptation, can be made into an efficient burglar alarm for shops, offices or factories.

In a car or lorry it may be fitted to the dashboard. If a potential thief tampers with the switch, either the



Completely thief proof

horn or some other warning device is sounded, or the fuses are blown.

If the vehicle's owner suspects that the combination is known, he can change it by adjusting the position of the dial. This is simply done by removing two screws.

Alternatively, the switch may be fitted under a seat, under the bonnet or in any other position. It can be set so that lifting the bonnet, releasing the handbrake, depressing the clutch or changing gear will sound the horn. It can also be adapted to lock the bonnet or doors, or to prevent movement of the controls.

Once fitted, the switch is completely enclosed. It is impossible for an unauthorized person to inspect the wiring.

Enquiry Ref. No. F.1/9

New Abrasive Technique

CLAIMED to be the most revolutionary development in the polishing field in the last 15 years, the new P.G. wheel employs an entirely new

JANUARY, 1956

“That’s an excellent idea—to ALL our reps...”



... yes we'll present them with a Prestons Swiss Chronograph—a 17 jewel lever, water-protected, shock-protected, anti-magnetic, fully guaranteed, precision wrist watch, with stop-watch action, that has many other uses, ideally suited to those in Industry both at work and leisure. Suitably engraved, it is a very acceptable tax-free, extra bonus, which is a worthy expression of a Board's goodwill.

WRITE TO US.

Prestons, leading suppliers of Swiss Stop-Watches to British Industry, will send you chronographs on approval.

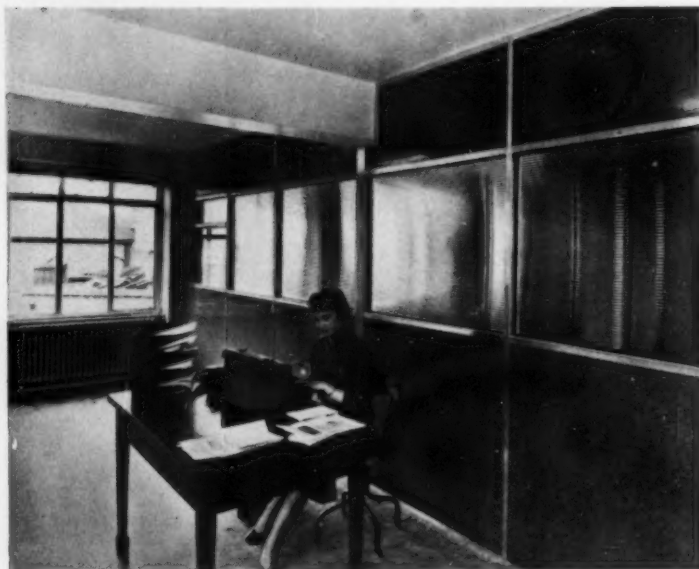
Please write to us.

...give a SWISS CHRONOGRAPH

from the firm who supplies YOUR Stop-Watches

PRESTONS LTD.

SWISS-WATCH SPECIALISTS
DEANSGATE, BOLTON, LANCs.



Efficient Office Planning

The Anderson Type 'F' System of partitioning is designed to make the best possible use of floor space. Segregation of departments into quiet, orderly units improves working conditions and simplifies direction and control.

This modern system of unit construction, utilising extruded aluminium supporting members, embodies special features including rubber glazing beads and rubber inserts in architraves, reducing noise and vibration to a minimum. Choice of panelling may be made from a wide variety of attractive sheet materials. Speedy dismantling and re-erection to a new layout is made possible by simplified floor and wall fixing. Enquiries are invited. Please ask for literature.

HIGH-GRADE PARTITIONING BY A · C · C

ANDERSON CONSTRUCTION CO. LTD.
CLIFTON HOUSE, EUSTON ROAD, LONDON, N.W.1 EUSon 7465

Agents throughout the United Kingdom and Overseas



Long-life abrasive

method of coated abrasives application.

The wheel is built up of more than 1,000 segments of coated abrasive cloth; efficiency is maintained continuously, fresh grain being exposed as wear takes place. Its self-conforming profiling action eliminates many of the difficulties encountered when polishing contoured surfaces. Requiring no "breaking in" or dressing, it is capable of performing, in one operation, most of the jobs formerly done by such methods as dressed wheels and buffs.

In the U.S.A., where the wheel has been used for some time, one plant reported that the wheel lasted 35 hours, compared to the maximum of 15 to 20 minutes for dressed wheels performing the same operation.

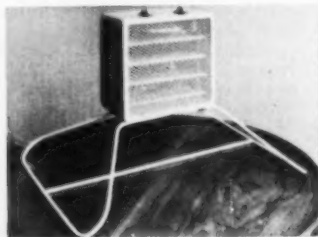
Enquiry Ref. No. F.1/10

WELFARE EQUIPMENT

Fan-Heater

TWIL purposes of multi-bladed fan embodied in the portable K-L electric-powered heater: (a) in winter, with the two-strength "black-heat" element switched on, to circulate warm air; and (b) in summer, simply to ventilate.

The fan needs no special care in handling. Element and blades are enclosed, and their insulated casing cannot get too hot to hold. The wide-



Heats and ventilates

BUSINESS

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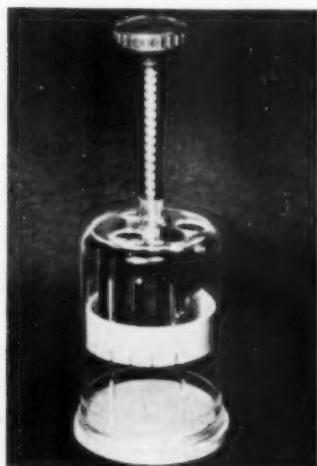
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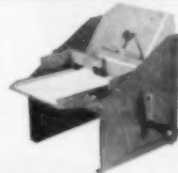
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MARKET RESEARCH AND ADVERTISING

Continued from page 97

Late in 1953, Carters decided to put more finance into their export marketing venture. This not only made it possible to increase the number of markets entered but to arrange a travel programme for investigating markets and appointing agents on the spot. Six members of the staff of the agency undertook overseas tours covering Central and South Africa, Europe, Ceylon, India, the Far East, Australasia, the Middle East, North America, the West Indies, Mexico, Venezuela and other parts of South America.

Because of the previous experience of the agency staff, it was possible to decide before each member of the touring team left England the type of agent that should be looked for. In many cases they went prepared with lists of likely agents. For the first time a formal letter of agreement was drawn up and signed by all sales agents.

In 1954, the agency began a series of direct mailings to doctors to intensify their campaign on the medicinal properties of *Ribena*. By this time Carters had taken a full-time doctor on to their staff. They were thus able to conduct an additional series of experiments about which a series of scientific pamphlets could be written and mailed to doctors. A special pamphlet was prepared to wrap round each bottle and describe in technical detail the properties of the product.

The development of export display material is worthy of special note. The first display material for pharmacists was completely medical. A showcard was produced showing a nurse recommending *Ribena*. In 1954, when Carters were appealing more to the general public, new showcards were designed depicting children cycling and skipping, to portray the impression of health given through *Ribena*.

What were the results of this export marketing campaign? Every year since 1952 the export sales of the product have nearly doubled. Total export sales are still well below home market sales but then, of course, the home market became relatively enormous as a result of Government sponsoring during the war. It has taken time and money to develop a similar situation overseas, but every year shows the product more firmly established.

HOUSING SCHEME

Continued from page 122

munication, and on the fact that even senior executives are regarded—justifiably—as “approachable.” Their welfare programme is composed of entirely practical measures like an employee’s benevolent scheme (self-supporting as a result of generous assistance from the management in the initial stages) and a first-rate medical service.

The housing scheme is also run informally. There are no committees, and few rules and regulations. The link between the employees and the board of directors is the manufacturing company’s secretary. He interviews the applicants, and gives advice on all aspects of house-ownership. Often he is able to point out snags which the applicants have overlooked. Some would-be borrowers forget Schedule A taxation when assessing their commitments, and have to be reminded that they will encounter a much heavier liability in this respect than a man who obtains a building society advance.

These discussions take place in a friendly atmosphere, and a written application is not submitted to the board of directors until both parties are satisfied that the proposal is sound. If a prospective borrower has his eye on a house which is really beyond his means, he is advised by the company secretary to look for something cheaper, so there is virtually no question of the directors having to reject an application.

No attempt was made to “splash” the scheme when it was introduced in 1950. The company took the view that it should be allowed to find its own level; if only for financial reasons, they were not anxious to encourage a sudden rush of applications. But the news soon got around, and the number of employees who are participating in the scheme at present suggests that a gentle approach was at least as effective in the long run as any amount of publicity.

Details of the subsidiary schemes are posted on the works notice boards and the personnel officer makes sure that they are brought to the attention of hourly-paid workers who, he feels, might benefit from them.

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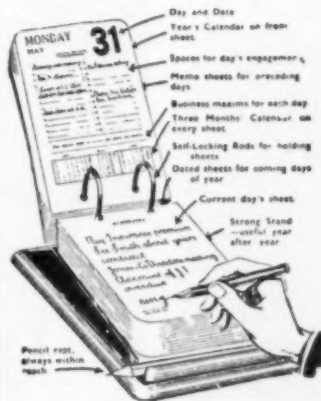
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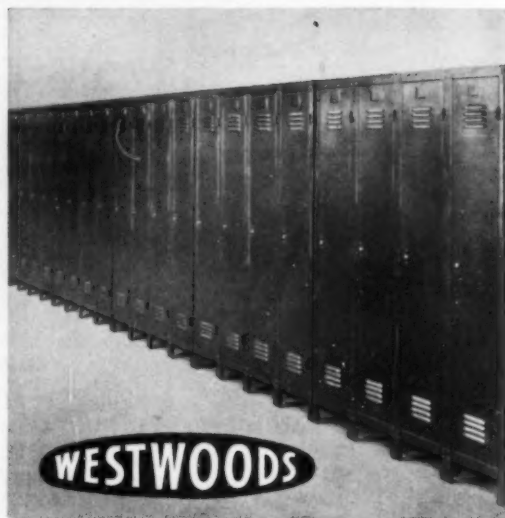
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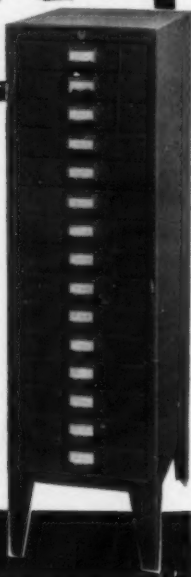
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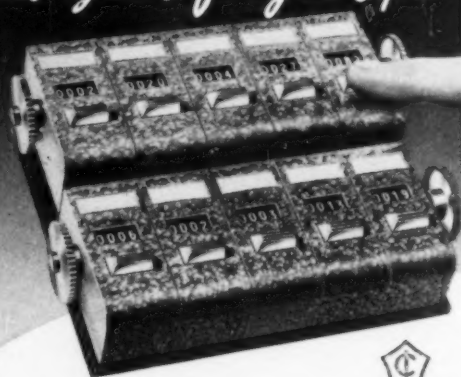
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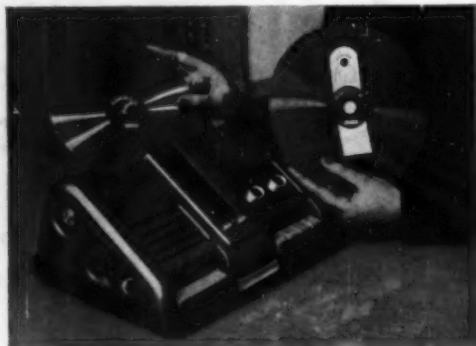
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